Lecture
ON
COÖRDINATION OF MOVEMENT AND ITS DERANGEMENTS.

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GENTLEMEN,—For the successful performance of any movement the liberation of a definite quantity of motor nerve force and a proper distribution of that nerve force are necessary. The disorders of production (paralysis and spasm) have already been treated of. The derangements of distribution will now be considered. And in studying the disorders of coördination it is essential, as in the case of the disorders of production, to start with a clear idea of the mechanism by means of which coördination is effected.

The great majority of movements which we are capable of executing result, not from the contraction of a single muscle, but from the combined action of several muscles. I use the word combined action and not combined contraction for there is reason to suppose that many muscular movements result not only from (*a*) the contraction of certain muscles, but also (*b*) from the simultaneous relaxation of others, their opponents. Steady and orderly—(i.e., properly coördinated) movements can only be accomplished when the various muscles concerned in their production act harmoniously together. Derangements of harmonious action, which are of course manifested externally by disordered and unsteady movement—(i.e., incoördination) are of frequent occurrence in practice. It may be stated generally that the coördinating mechanism for any voluntary movement consists of:—1. A group of nerve cells (the coördinating centre) in which nerve force is arranged, and from which motor nerve force is discharged in suitable combination for the production of that movement. 2. A series of motor (centrifugal) nerves, which conduct the motor impulses after they have been so arranged from the coördinating centre to the muscles concerned in the production of the movement. 3. A series of sensory (centripetal) nerves proceeding from the periphery to the coördinating centre and to the perceptive centres in the cerebrum by which these centres are kept informed as to the manner in which any given movement is being executed; and as a result of which alterations in the action of the coördinating centre—(i.e., the force with which the different muscles are being innervated, for I have for the sake of simplicity supposed that there is a distinct centre and mechanism for each individual coördinate movement) are produced.[1]

The coördinating centre can be set into action—i.e., it can be discharged by:—1. An effort of the will, as in the production of voluntary coördinate movements. (It would perhaps be more correct to say that the motor nerve force which is discharged by the cortical motor centres in obedience to a command of what we call the will, is rearranged and redistributed in its passage through the coördinating—lower—centres.) 2. External stimuli acting reflexly. In this case the coördinate movement is nothing more than a complicated (highly specialised) reflex act.

It is probable that the coördinating centres exist at the time of birth, but the more highly specialised (voluntary) coördinate movements can only be performed after these centres have been trained to functionate correctly (i.e., to correctly rearrange and redistribute nerve force), and after the connexions between the different parts of the coördinating mechanism (the connexions between the nerve cells forming the coördinating centre and between the coördinating centre and the other parts of the coördinating mechanism) have been opened up. Probably in the child some of these fine connexions are actually formed during (? as the result of) this process of education. This training of the coördinating mechanism is, as we all know by painful experience, a laborious process. Our first efforts at walking, writing, and the like, are clumsy and unsteady (incoördinate), and require to be constantly supervised by the sense of sight—i.e., by conscious visual perceptions; errors are being constantly corrected by fresh motor impulses from the higher cerebral centres. In other words the process is one of evolution.

After the continued performance of any coördinate act the connexions become so thoroughly well opened up and differentiated that the supervision of the higher cerebral centres is no longer necessary; the coördinating mechanism only requires to be put into action by an effort of the will and the movement is correctly performed. After frequent repetitions the motor impulses run as it were in grooves, and complicated coördinate acts can be performed quite unconsciously. In fact, after frequent repetition the coördinating centre and mechanism may acquire a sort of barrel-organ function, and once the action of the mechanism is initiated by a voluntary effort it will go on and complete a long and complicated discharge quite independently of consciousness. A pianoforte player, for example, will correctly execute a complicated piece of music, or a speaker will correctly recite a long series of words and sentences, while his thoughts are busied with some totally different subject. It is only necessary to turn on the handle, as it were, and a long series of highly specialised movements will be correctly produced. But further, if during this process of automatic reproduction consciousness is suddenly brought to bear upon the subject in hand, the coördinating mechanism will probably be deranged, and the correct production of the movement temporarily interfered with. The following is an excellent example of this fact. An accomplished lady of my acquaintance, whose first efforts at knitting were both clumsy and laborious, has now arrived at such perfection that she can not only knit and read aloud, but read with great feeling and expression. She further informs me that she has become so accustomed to knit when she reads aloud, as she is frequently in the habit of doing, that she actually knits quicker, and that her work is better (more even) when her mind is occupied in reading aloud than when she concentrates her attention on her work.

Now, in many, if not in all, of these cases, the coördinating centres are kept informed as to the manner in which the movement is being executed by sensory (centripetal) impressions passing from the periphery, more especially from the muscles, tendons, ligaments, and joints concerned in the production of the movement, probably, also, from the skin, and, in some cases, from the end organs of special sense. When these centripetal (sensory) impulses are interfered with by disease, coördinate movements can no longer be performed unconsciously, and the strict supervision of sight and consciousness become necessary. Even with this supervision the movements are often clumsy and unsteady (incoördinate). There is, in fact, in disease a return to the primitive uneducated condition. The process of disease is the very reverse of that of training; in short, instead of the process of evolution there is in disease a process of dissolution.

From what I have said with regard to the mechanism of coördination it will be perceived that unsteadiness and disorder (incoördination) of a complicated movement may result from (1) paralysis or paresis of some of the muscles concerned in its production (if all the muscles are paralysed the movement cannot, of course, be performed at all, but if some only are disabled the movement will be imperfect and unsteady); (2) spasm of any of the muscles concerned in its production, the coördinating mechanism being healthy; (3) as the result of the lesions of the coördinating mechanism itself. The incoördinating in cases of this description is not due to defective production, but entirely to the erroneous arrangement and distribution. Hence there is no true paralysis. These are the cases of ataxia properly so called, to which I now propose to direct attention.

Theoretically the lesion may be situated:—(1) In the motor portion of the coördinating mechanism (the coördinating centre or the motor strands connected with that centre); in cases of this description we have to do with motor ataxia. (2) In the sensory tracts, which convey external impressions from the periphery to the coördinating or perceptive centres—i.e., in the end organs of the sensory nerves or the sensory nerves themselves. This is sensory ataxia. Now, in sensory ataxia the

[1] We shall presently see that the supervision of the perceptive cerebral centres is only necessary while the movement is being learned; once the movement has become thoroughly learned and automatic it may proceed independently of any conscious supervision.

incoördination may be due to the following conditions:—(*a*) The coördinating or perceptive centres receiving erroneous impressions, as, for example, in visual vertigo[2] and the incoördination which results from it. (*b*) The coördinating centre not being informed of the manner in which movements are being executed, as in sensory ataxia properly so-called, or locomotor ataxia, for example. (*c*) The reflex grouping of muscles and their opponents being interfered with. Inequality of "tonus" in the muscles probably is due to this cause, and leads to incoördination. The exact position of the coördinating centres for voluntary movements in man is not yet absolutely determined. There are, however, good reasons for supposing that the corpora striata, the optic thalami, the cerebellum, and the corpora quadrigemina are the parts of the brain in which certain of the more important coördinating centres are situated. Undoubtedly, too, motor nerve force is rearranged and redistributed in the multipolar nerve cells of the spinal cord, which are, therefore, coördinating centres. Nerve impulses are also rearranged in the brachial, lumbar, and sacral plexuses outside the spinal cord, though these "junctions" can hardly be called coördinating centres. (The phenomena of locomotor ataxia seem to show that the lumbar portion of the spinal cord is a centre in which grouping of muscles takes place as the result of impressions passing upwards from the skin, tendons, ligaments, and parts of the lower extremities; while the importance of the spinal cord as a lower coördinating centre would seem to be corroborated by the fact that the pyramidal tracts form direct connexions with the highest motor nerve centres in the cerebrum on the one hand and with the multipolar nerve cells of the anterior cornua of the spinal cord on the other.)[3]

The comprehension of the disorders of coördination is, I think, much facilitated by drawing a sharp line of distinction between the mechanism concerned in—1. The relation of the head to the trunk, or plummet line of the body. 2. The maintenance of the erect position. 3. The act of walking. 4. The more purely voluntary movements, such as those of the upper extremities, and of the lower extremities when the patient is lying down—i.e., not in the erect position. It is also, of course, necessary to understand, so far as it is at present known, the *rationale* of each of the different mechanisms.

Let us consider, then, each of these coördinating mechanisms and their derangements separately.

The coördinating mechanism concerned in the regulation of the head to the trunk, and its derangements.—The position of the head to the trunk—i.e., to the plummet line of the body—is being constantly adjusted. This adjustment is, I think, best explained by supposing that the mechanism is to a large extent a reflex one, and that the movements of the head to the plummet line of the body may to a considerable extent be adjusted independently of consciousness by means of this reflex mechanism.

The centre of the reflex arc is probably situated in the cerebellum, pons, or medulla; possibly, too, the corpora quadrigemina are in some cases concerned. The centrifugal nerves are the motor nerves which supply the muscles which move the head on the trunk. The centripetal nerves are the sensory filaments proceeding from the semicircular canals to the cerebellum, and under certain circumstances the fibres of the optic nerves, proceeding from the retinæ to the (?) corpora quadrigemina and (?) cerebellum. The reflex mechanism is being constantly set into action by motor impulses from the higher cerebral centres, as the direct result of visual impressions—i.e., by impressions made on the retinæ by external objects. Erroneous impressions from the retinæ produce, as we shall presently see, disturbance of the sense of equilibrium—i.e., they cause exactly the same result as derangements of the organ of the sense of poise itself (i.e., the semicircular canals). It would appear that the semicircular canals are the organs of the sense of equilibrium, or sense of poise of the head, and therefore of the body. They contain a fluid called the endolymph; the presence of this fluid stimulates the sensory nerve-fibres which are distributed to the walls of the membranous ampullæ; as the result of this stimulation sensory impressions are generated and conveyed inwards to the reflex (coördinating) centre, and alterations in the position of the head occur. Now, since the three canals are placed in the head in planes nearly at right angles to one another, it follows that the nerves of the three ampullæ are differently pressed upon and stimulated with every alteration in the position of the head. In this manner the relation of the head to the plummet line of the body (or the position of equilibrium) is being constantly maintained, independently of consciousness. Derangements of the sense of equilibrium or poise are manifested subjectively by a feeling of giddiness or vertigo, and objectively by difficulty in maintaining equilibrium—in standing, walking, and in performing all delicate coördinate acts. It is of the greatest importance, therefore, to remember that for the maintenance of balance and for the performance of coördinate acts, the just appreciation of the relationship of external objects and the position of our bodies in space is necessary, and that any *positive* derangement of the sense of equilibrium—(i.e., all conditions in which there is vertigo) are necessarily attended with more or less interference with the coördinate acts. According to Professor M. Foster, there is "no reason for thinking that the failure to keep upright is due to the feeling of giddiness, in the sense of being a direct result of the condition of the consciousness." On the contrary, since the peculiar movements characteristic of vertigo may take place in this absence of consciousness without the vertigo being actually felt, we may with security assert that the failure to stand upright and the feeling of giddiness are both concomitant effects of the same disarrangement of the coördinating mechanism."[4]

Vertigo.—Let us now consider the different conditions which we find are the most common causes of vertigo or giddiness in actual practice at the bedside; and in considering these causes it is important to remember that "all cases of vertigo, however produced, have the common subjective feature that one or more of the sets of sensations which form the basis of our appreciation of the relation of our body to external things disagree, and are in conflict with the rest of the sensations which go to make up the same appreciation."[5] Vertigo or giddiness is either active or passive. In active vertigo the patient feels as if he himself were being moved or whirled through space; in passive vertigo surrounding objects seem to be moved past him. In active vertigo the lesion may with some probability be considered an irritative or discharging one; in passive vertigo a paralysing or destroying one. The direction in which the patient is whirled, or in which surrounding objects are moved past him, probably depends (in the case of auditory vertigo) upon the particular semicircular canal which is affected.

The most common causes of vertigo which we meet with in practice are as follows:—1. Lesions of the semicircular canals; auditory vertigo; seen in so-called Menière's dis-

[2] The different causes of vertigo will be presently described. In all cases of vertigo there is more or less incoördination of all voluntary movements.

[3] In speaking of the position of the coördinating centres, Professor Michael Foster says: "We have ventured to use the phrase 'coördinating centre,' but it must be understood that we have no right to attach more than a general meaning to the words. We cannot, at present at least, define such a centre in the same way that we can the vaso-motor or respiratory centre. When the optic lobes as well as the cerebral hemispheres are removed from the frog, the power of balancing itself is lost; when such a frog is thrown off its balance by inclining the plane on which it is placed, it falls down. The special coördinating mechanism for balancing must therefore, in this animal, be situated in the optic lobes; but after removal of these organs the animal is still capable of a great variety of coördinate movements; unlike a frog retaining its spinal cord only, it can swim and leap, and when placed on its back immediately regains the normal position. The cerebellum of the frog is so small, and in removing it injury is so likely to be done to the underlying parts, that it becomes difficult to say how much of the coördination apparent in a frog possessing cerebellum and medulla is to be attributed to the former or to the latter; probably, however, the part played by the former is small. In the mammal, as we have stated, removal of the whole middle and hind brain does away with the most marked of these coördinating mechanisms. Removal of the pons Varolii alone has the same effect. Injury to, or disease of, the more superficial parts of the corpora quadrigemina or of the cerebellum does not appear to influence the movements of the body at large to any striking extent; but there are many pathological cases, as well as experimental observations, tending to associate the coördinating mechanism of which we are speaking with the deeper part of the cerebellum. It would be hazardous, in the present state of our knowledge, to make any definite statement concerning the share taken by these several cerebral structures in the various coördinations." Again: "In the higher animals, including mammals, as in the frog, after the removal of the cerebral hemispheres (or rather of the cerebral convolutions, for interference with the corpora striata and optic thalami is apt to induce disorders of which we shall speak presently), even though volition and intelligence appear to be largely if not entirely lost, the body is still capable of executing all the ordinary movements which the animal in its natural life is wont to perform, in spite of the movements necessitating the co-operation of various afferent impulses; and that therefore the nervous machinery for the execution of these movements lies in some part of the brain other than the cerebral hemispheres. We have reason for thinking that it is situated in the structures forming the middle or hind brain."—(Text-book of Physiology, Pp. 620, 613.)

[4] Text-book of Physiology, p. 619.

[5] Ibid., p. 617.

ease. 2. Paralysis of some of the muscles of the eyeball or errors in the refracting media; visual vertigo. In consequence of these derangements of the visual apparatus, erroneous, or rather contradictory, impressions of the relationship of external objects are carried to the cerebral perceptive centres. 3. Lesions of the coördinating and cerebral centres, such, for example, as tumours of the middle lobe of the cerebellum. This form we may term central vertigo. 4. Derangements of the cerebral circulation. (Circulatory vertigo as I am in the habit of terming it.) 5. Reflex irritation arising in distant organs, such, for example, as in the stomach (gastric vertigo). In many of these cases the vertigo is probably due to derangement of the circulation rather than to reflex irritation of the coördinating centre itself. 6. Epileptic vertigo, seen in cases of minor epilepsy (petit mal). 7. Psychical vertigo. Giddiness may sometimes arise from purely psychical causes, the giddiness which is caused by looking over a precipice is in part psychical, partly also visual. 8. Toxic vertigo. Certain drugs, tobacco for example, produce giddiness, but it is perhaps erroneous to group these cases under a separate heading. Poisons which produce vertigo probably act either through the circulation or directly on the coördinating centres themselves.

[A description was then given of the more important forms of vertigo, and the differential diagnosis of the condition considered.]

Clinical Remarks ON SOME AFFECTIONS OF THE URINARY ORGANS.

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On Pus in the Urine.

WE sometimes meet with cases in which pus is present in the urine, when it is difficult to determine whether it is derived from the bladder or kidneys. One cause of this difficulty arises from the circumstance that the presence of pus in the urine may give rise to great irritability of the bladder without that organ being implicated. It is well known that changes in the normal constitution of the urine of the most opposite character may render the bladder intolerant of its contents; thus the watery urine of hysteria sometimes causes as much irritation as the concentrated acid secretion of gout; and the presence of albumen occasionally produces a frequent desire to empty the bladder, accompanied also in some cases with pain on micturition, which may be the first symptoms leading to the discovery of Bright's disease. Except in a few instances, when pus is derived from an abscess in the prostate, or from the lining membrane of the urethra (in both of which cases the quantity will be small), whenever we find pure pus which is readily miscible with the urine, and is deposited in a yellow layer at the bottom of the vessel, the water at the same time being acid, we may decide that it comes from the kidney; for when pus is secreted by the lining membrane of an inflamed bladder it is usually more of the nature of mucus than pus, is glairy, viscid, often tinged with blood, and soon becomes ammoniacal and fetid. Pus coming from the kidney may be derived either from interstitial suppuration of the gland, from a distinct abscess in the organ, or from the lining membrane of the pelvis in a state of inflammation. The last affection, to which the term suppurative pyelitis should be restricted, may arise from several causes, the most common of which is perhaps the presence of a calculus in the kidney. It may, however, be simply the result of cold, and it is to the form of inflammation thus induced, which may be termed catarrhal pyelitis, that I wish to direct attention; for though casually alluded to by various authors it has attracted but little notice, and is, I believe, much more common than is generally supposed. Two cases of this kind having occurred in my practice during the last twelve months, I will briefly relate them.

During the cold weather of last winter an elderly gentleman one day called upon me, bringing some of his urine with him, complaining of great irritability of the bladder, with constant pain, which was referred chiefly to the end of the penis. He was a thin man of abstemious habits, but of a gouty constitution, though he had never had complete gout. I found that he had been a good deal exposed to cold during several days previous to his visit to me, but had experienced no general ill effects from it; he complained of nothing but his bladder.

Upon examination of the urine which he brought, I found that it contained nearly half its volume of albumen. I therefore ordered him home at once, to go to bed and stay there, apply some mustard to his loins, and take some acetate of ammonia to act upon his skin. In two days from this date the albumen had almost all disappeared, and a considerable quantity of pure pus had made its appearance in the urine instead; the specific gravity was about normal, no casts could be found, and the slight amount of albumen remaining was evidently derived from the pus. Though the urine had thus changed, the pain on micturition continued to be so constant and severe that the patient thought the disease must be in the bladder or urethra, and not in the kidneys; there was never any appearance, however, of ropy mucus or blood in the urine, nor any discharge from the urethra, and though both a sound and catheter were passed on more than one occasion, nothing could be detected in the bladder; though the passage of the instrument produced excessive pain in the urethra and neck of the bladder, showing that an exceedingly sensitive state of the nerves existed. I felt convinced that this irritability was caused entirely by the presence of the pus in the urine, and the history of the case showed that the complaint originated in the kidney.

The case went on without much change for nearly four months, the urine always depositing a layer of thin pus after standing, being more or less acid, sometimes intensely so, and containing lithates together with the pus. No remedies produced any decided effect, though many were tried, such as counter-irritation over the kidneys, citrate of potass, &c. Temporary relief was obtained by the use of morphia suppositories. The general health, which suffered less than might have been expected, was kept up by plenty of light unstimulating food, and the quantity of pus gradually but steadily diminished, the irritability of the bladder disappearing together with it. In the spring the patient got out of doors, went from home, and soon completely recovered, the urine becoming quite healthy, and remaining so afterwards.

The second case was that of a young married lady whom I saw with Dr. Goyder. Her illness commenced by the passage of some bloody urine, and arose without any apparent cause, but probably from cold. The bleeding was followed by pain on micturition, for which she sought medical advice. Dr. Goyder found pus in the urine when he first saw her, but there were no other very serious symptoms until nearly a fortnight after the bleeding occurred; rigors with vomiting then came on, showing that there was inflammation of the kidney. I now saw her and found pain with great tenderness upon pressure over the right kidney, but none over the left; the bladder was irritable, the urine acid, and containing pus, which was deposited in a yellow layer at the bottom of the vessel after standing. The specific gravity was about normal, and there was only a trace of albumen present, evidently derived from the pus. The symptoms of acute nephritis continued for some time, the vomiting becoming so incessant that no food could be retained upon the stomach, and the strength had to be supported for two or three weeks by nutrient enemata. The question arose in this case what was the cause of the hæmorrhage and inflammation of the kidney with formation of pus; were they produced by a calculus in the pelvis? She had never suffered previously from symptoms of stone or gravel, such as nephritic colic or deposits of sand in the urine, so I came to the conclusion that the case must be looked upon as one of suppurative pyelitis from cold. The inflammatory symptoms gradually subsided, the vomiting stopped, the general health steadily improved, and the amount of pus in the urine slowly diminished. At the end of July, about eight weeks from the time of my first seeing her, the patient was able to leave home for change of air; a little pus still remaining in the water, though it was otherwise healthy. I heard that she continued to improve while away, and she returned at the expiration of some weeks in good health. Dr. Goyder informs me that he has examined the urine several times since she came home, and finds it free from pus.

This case differs from the former one by having been attended with more severe inflammatory and constitutional symptoms, but by less pain and irritation of the bladder.

The state of the urine was very similar in both, and they ran the same rather tedious course, the secretion of pus being apparently but little influenced by any remedies, beyond those which tended to improve the general health. The suppurative process appeared gradually to wear itself out, and to leave no permanent kidney mischief.

On Urine of Low Specific Gravity

Cases of kidney disorder sometimes occur in which the urine remains persistently of low specific gravity, without containing albumen. Many years ago the late Sir B. Brodie pointed out that in these cases operations were badly borne, the constitution being in an unhealthy state, and unable to bear any sudden shock or drain. The lightness of the urine in these cases seems to depend principally upon a deficiency of urea, and it will be found to be not only light in both weight and colour, but without the proper urinous smell. It will also keep for many days without becoming fetid, or undergoing any apparent change. Many years ago I noticed the want of smell and the keeping power of the urine in chronic Bright's disease; and I have often been correct in diagnosing disease of the kidneys when I have found the urine inodorous. The watery urine of hysteria will be found to smell in the ordinary way, though faintly, and will soon decompose when kept. Many of the cases to which I wish to direct attention are connected in some way with Bright's disease, though there may be no escape of albumen from the kidneys; others, however, occur in which the kidneys seem temporarily to have lost their proper excretory powers in consequence of a defective supply of blood, such as occurs in anæmia.

I will briefly allude to two cases in illustration of these two forms of the affection. During the past summer I saw a middle-aged gentleman with Mr. Terry, suffering from symptoms of uræmia following an attack of acute congestion of the kidneys, the urine being highly albuminous. By active treatment he recovered so far that he was able in a few weeks to resume his usual occupations, no trace of albumen remaining in the urine; he did not, however, get thoroughly strong, and Mr. Terry tells me that the urine remains persistently of low specific gravity, though perfectly free from albumen. The kidneys have evidently not recovered their healthy powers.

The other case is that of a young woman who three years ago had an attack of exophthalmic goitre, accompanied with anæmia. The disease is gradually disappearing; the enlarged thyroid has diminished; the prominence of the eyeballs has almost disappeared, and the heart's action, which was at one time violently excited, and accompanied by a loud anæmic bruit, has become almost natural; she is still, however, somewhat pale and bloodless, and the urine is too low in specific gravity, as well as inodorous. In this case I do not think that there is any kidney disease, and believe that she will recover her health, and that the urine will become natural.

ON THE NATURE OF SNAKE-POISON;

ITS EFFECTS ON LIVING CREATURES, AND THE PRESENT ASPECT OF THE TREATMENT OF THE POISONED.

BY SIR JOSEPH FAYRER, K.C.S.I., F.R.S.

(*Concluded from page 241.*)

Treatment.—The result of my experience is that so far no physiological antidote to snake virus is known, and that when the full effect on the respiratory centres is produced, remedies are of little, if any, avail, albeit, when the poison has entered in smaller quantities, treatment may be of service on general principles. Viewing the apparent analogy between curara and snake-poisoning, death in both being caused by paralysis of the respiratory apparatus, Dr. Lauder Brunton and I hoped that, by artificial respiration and supporting the body temperature, we might keep an animal poisoned by snake virus alive until elimination had taken place; and the result of some experiments justified the anticipation to some extent, for animals were kept alive for many hours, but succumbed at length when the artificial respiration was withdrawn. Mr. V. Richards, who repeated our experiments in India, succeeded thus in keeping an animal alive for days, though it, too, succumbed finally. In the case of curara, artificial respiration is completely successful, though not so in snake-poisoning. This seems to show that the damage done by the snake-poison is of a more serious and permanent nature than that by curara. I would encourage efforts to devise any method of treating snake-poisoning in whatever degree it presents itself, for some means of neutralising the poison or of restoring the damaged nervous system and blood may still be discovered. At any rate, it is with snake virus as with other deadly poisons, there must be a quantity, however small, which, though dangerous, is not of necessity fatal; in such cases we may influence the result by treatment, and save life in some. But after long and repeated observation in India, and subsequently in England, I am forced to the conclusion that all the remedies hitherto regarded as antidotes are absolutely without any specific effect on the condition produced by the poison, and that such aid as we can give must depend on preventive and local treatment.

I will now briefly describe the measures to be adopted in the treatment of snake-poisoning, and especially refer to the permanganate of potash as a remedy.

The first and most important indication is to prevent the poison entering into the circulation; to this all else is subsidiary. The rapidity with which this takes place depends a good deal on the part of the body bitten, and on its vascularity. When the poison enters a vein, if the bite be inflicted by a vigorous snake, the result is generally rapidly fatal. Experiments on animals show that bites inflicted on parts, even where large veins are not implicated, produce their effects so rapidly that only immediate severance of the part or complete constriction can prevent absorption. It is necessary therefore, as quickly as possible after a bite has been inflicted, to apply a ligature above the wound, and so tighten it as to completely arrest the circulation. As it happens in 94 per cent. that the bite is inflicted on an extremity, this may frequently be accomplished. But in parts where no ligature or elastic bandage or cord can be applied, proceed at once to excise the bitten part; this, indeed, should be done in all cases, ligatured or not. Then make an incision through the bite, reflect the skin, expose the tissue wherever that is altered in colour, dissect it out, and be careful to remove every part of it; next apply cautery or some escharotic, or the permanganate solution, taking care that it reaches as much as possible in every direction where the poison may have infiltrated. After this is done the ligature may be relaxed, for if the virus be destroyed the danger of its entering the circulation is past. Should it have already entered, as is only too probable, all that can be done is to give stimulants, keep the patient warm, at rest, and if the respiration begin to fail use artificial respiration, and endeavour to keep him alive till the poison be eliminated; the temperature should be maintained. In 1869 I gave instructions for the treatment of snake-bite, and, excepting that I would substitute Esmarch's bandage for the ligature recommended by Dr. Wall—that permanganate of 5 per cent. solution should be applied to the wound when the venom has been carefully dissected out, or injected when it has not been cut out—I have nothing to alter in these suggestions. Suction, being unlikely to be of much avail, is practically useless to the patient and dangerous to the operator, and it should be discouraged, and not relied on. Where the poison has happily been limited to the seat of inoculation, and in cases where no great quantity of virus has been absorbed, we may hope to do good, but where the poison has entered the circulation in larger quantities and the physiological symptoms are developed, the prognosis is exceedingly unsatisfactory.

Instructions.—As soon as possible after a person is bitten by a snake, apply a ligature made of a piece of cord, or an elastic bandage, round the limb or part at about two or three inches above the bite. Introduce a piece of stick or other lever between the cord and the part, and by twisting, tighten the ligature to the utmost. After the ligature has been applied cut the punctures to the depth of a quarter of an inch with a penknife or other similar cutting instrument; let the wounds bleed freely; or, better still, excise the punctured part and all the infiltrated areolar tissue subjacent to it. Apply either a hot iron or a live coal to the bottom of these wounds as quickly as possible, or inject into the subcutaneous cellular tissue a solution of permanganate of potash—5 per cent., or some carbolic or nitric acid. If the bite be where a ligature cannot be applied, with a sharp penknife cut out the bitten part and all the infiltrated cellular tissue to the depth of a quarter or half an inch. Then apply the hot coal or hot iron to the very bottom of the wounds, or

better, the permanganate of potash. Give fifteen drops of solution of ammonia diluted with an ounce of water, immediately, and repeat it every quarter of an hour, for three or four doses, or longer, if symptoms of poisoning appear. Or give hot brandy, or rum, or whisky or spirits, with equal parts of water, about an ounce of each (for an adult) at the same intervals. Suction of the wounds is not very likely to be beneficial, and as it may be dangerous to the operator, it cannot be recommended. If symptoms of poisoning set in and increase, if the patient becomes faint or depressed, unconscious, nauseated or sick, and respiration begins to fail, with symptoms of paralysis of tongue and fauces, apply mustard poultices, or solution of ammonia on a cloth, over the stomach and heart; continue the stimulants and keep the patient warm, but do not shut him up in a hot, stifling room, or a small native hut—rather leave him in the fresh air than do this. Chronic—i.e., milder—cases must be treated on the same and general principles. Do not make him walk about if depressed; rouse with stimulants, mustard poultices, or ammonia, but let him rest. If the person be brought, as he or she probably will be, some time after the bite has been inflicted, and symptoms of poisoning are present, the same measures are to be resorted to; they are less likely to be successful, but nothing else can be done. In many cases the prostration is due to fear; the bite may have been that of a harmless or exhausted snake, and such will rapidly recover if so treated and encouraged. If poisoned, but, as frequently is the case, not fatally, these measures are the most expedient. A plain summary or translation of these suggestions might be hung up in public places. The people should be warned against incantations, popular antidotes, and loss of time in seeking for aid. Every police inspector, of whatever grade, might be taught the application of the simple measures I have described, and should be enjoined to make them known as widely as possible among the police and the people. There can be little doubt that recoveries from Indian snake-poisoning occur chiefly in cases where the snake has been exhausted or harmless, or has bitten imperfectly, and in a few cases where prompt interference has prevented the entry of the poison into the circulation.

Let me now make some remarks on the remedial value of permanganate of potash. During my investigation of the value of remedies for snake-poisoning permanganate of potash was not omitted, and I made the following experiments:—

June 12th, 1869: A fowl was bitten by a cobra in the thigh at 3 P.M.; at 3.1′ 50″ P.M. fifteen drops of solution of permanganate of potash were injected into the spot. Dead in seven minutes, 3.35 P.M. Forty drops of solution of permanganate of potassium were injected into the external jugular of a dog. This produced no apparent effect on the animal. At 3.48 P.M., bitten by a cobra (which had bitten before and was not fresh) in the thigh, the fang punctures were at once washed with the strong solution of permanganate, and was well rubbed in. 3.52 P.M: Sixty more drops were injected into the vein. 3.54 P.M: Two drachms were injected into the bowel, all the symptoms of cobra poisoning advancing rapidly. 4.12 P.M.: Forty more drops were injected into the jugular vein. 4.25 P.M.: Dead in thirty-seven minutes.

In 1878 Dr. Lauder Brunton and I made the following experiments, which confirm the power of the permanganate to neutralise the poison before it has entered the circulation, but shows its inefficiency when it follows it.

Experiment 1.—Five milligrammes of poison were dissolved in one cub. centim. of water, and mixed with one cub. centim. of liquor potassæ permanganatis (B.P.), and injected under the skin of a guinea-pig. No symptoms were produced, and the animal remained quite unaffected.

Experiment 2.—Two rabbits of the same litter, each weighing exactly 2 lb. were taken. Five centigrammes of cobra poison dissolved in one cub. centim. of distilled water were mixed with one cub. centim. of liquor potassæ permanganatis (B.P.), and allowed to stand for about eight minutes. The mixture was then injected under the skin of the flank of one rabbit. No symptoms whatever were produced, and the animal, though kept under observation for some weeks, remained quite unaffected by the poison. Five milligrammes of cobra poison, dissolved in two cub. centims. of water, were injected into the other rabbit at the same time. During the ejection a little of the poison was lost, so that the animal did not receive the full dose, yet it died in thirty minutes.

Experiment 3.—April 4th, 1878. Guinea-pig weighing 1½ lb. Injected four centigrammes of cobra poison into leg. 4.1 P.M.: Ligature applied immediately; permanganate of potash applied immediately. 4.5 P.M.: Twitching. 4.10 P.M.: Dying. 4.13 P.M.: Convulsion. 4.14 P.M.: Dead.

Experiment 4.—April 4th, 1878. Guinea-pig weighing 1 lb. 3.45′ 20″ P.M.: Injected ½ gr. = 4 centigrammes—of cobra poison under skin of leg. A ligature was applied round the leg in one minute, and in five minutes permanganate of potash was rubbed into an incision made over the site of injection. 3.52 P.M.: Ligature cut. 3.53 P.M.: Twitching violently, leg paralysed. 3.57 P.M.: Dying. 3.58 P.M.: Dead—less than thirteen minutes.

Dr. Wall, who has carefully investigated the subject, makes the following pertinent remarks[1]:—"As it was found that potassium permanganate does destroy the poison, steps were taken to see if it would be of any practical use in the treating of animals suffering from snake-bite. It was found by experiment that a considerable quantity of potassium permanganate, dissolved in a weak saline solution, could be injected into the circulation of an animal without producing any immediate effect. A dog suffering from cobra poisoning had a cannula placed in its saphena vein, a solution of potash was injected, but though a large quantity was cautiously and gradually introduced into the circulation, and though, at the same time, life was prolonged by artificial respiration, in no way was the least benefit to be perceived from the remedy. The reason is obvious. It is quite true that permanganate of potash destroys the active agent of cobra poison by oxidising it; but when introduced into the blood it, of course, commences oxidising indifferently all the organic matter with which it comes in contact, but it has no power of selecting one organic substance for oxidation rather than another. The oxidising power of the permanganate is, therefore, exerted on the constituents of the blood generally instead of being reserved for the cobra poison in it alone; so if cobra poison is dissolved in an organic solution, and the permanganate is added before injection, the poison suffers little, if any, diminution in strength, for the oxidation has taken place chiefly at the expense of the other organic matter. Thus it would be necessary to destroy all the constituents of the blood by oxidation before all the poison in it could be destroyed too. If a substance should be found having the power of oxidation with a special affinity for exercising it on snake-poison, the problem of the treatment of snake-bite would be solved; but permanganate of potash has not this special power." It has been pointed out that there are other substances which greatly diminish or destroy the action of snake-poison when mixed with it out of the body. Of all such agents, permanganate of potash is probably the best; still it seems to be of little value in practice.

Wall further remarks, "It may be asked, why, if metallic salts, tannic acid, hydrate of potash, and permanganate of potash, destroy snake-poison, should not these substances be used in preference to excision? The reply is obvious. If we could know the exact position of the poison, and if there were only one deposit, we might probably succeed in destroying it by injection. But to remove the poison deposited by the bite of a snake requires a most intelligent observation, guided by eyesight and judgment; but an injection of a chemical agent must be to a great extent made by guesswork, and the solution, instead of following the poison, takes the line of least resistance in the tissues, often leading it far from the poison."

In a pamphlet[2] dated 1882, Richards says: "A solution of 5 per cent. of permanganate of potash is able to neutralise the poison"; and recommends that this should be injected into the bitten part after a ligature has been applied; it is less likely to cause sloughing of the tissues than any other agent which could neutralise the venom. In the letter of July 22nd, 1882, he says: "It is in my experience the best local application we possess. It is not a physiological antidote, but is a chemical one; but is utterly powerless to effect any influence on the lethal action of snake-poison." He means the constitutional action. He is of opinion "that wherever opportunity offers the injection of permanganate of potash should be resorted to, assuming that a ligature has been efficiently applied (where it can be applied at all) within five minutes from the bite. In the average run of cases the permanganate will certainly destroy the poison beyond the ligatured part," if it come in contact with it; but, as Wall pointed out, the difficulty of ensuring the contact with the poison is so great

[1] Indian Snake Poisons, p. 129.

[2] Experiments on Permanganate of Potash; its use in Snake-poisoning.

as to render it practically unreliable. I agree with Richards that, so far as it goes, it is a good local application, and as such it ought to be used; or, in its absence, tannic acid or liquor potassæ might be resorted to with the same object; but as a constitutional remedy, as a physiological antidote, it is powerless, like all others that have been tried and failed to do good; and Lacerda himself, athough he attributes the highest value to it as a chemical antidote, both as a powerful oxdisin g agent and by the action of the potash, says: "As to the idea of finding a physiological antidote for snake-poisoning, I entirely agree with you that it is a utopia."[3]

After careful consideration, fully admitting that in permanganate of potash we have an agent which can chemically neutralise snake-poison, as indeed was shown by Dr. Brunton and myself in 1875, I do not ascertain that more has been done than to draw attention to a local remedy already well-known as a chemical antidote, the value of which depends on its efficient application to the contaminated part (which Dr. Wall has pointed out is too uncertain to be reliable), and we are still as far off an antidote as ever, whilst the remarks made by me in 1868 are as applicable now as they were then. They were as follows:—"To conceive of an antidote (as that term is usually understood) we must imagine a substance so subtle as to follow, overtake, and neutralise the venom in the blood, and that shall have the power of counteracting or neutralising the poisonous and deadly influence it has exerted on vital force. Such a substance has still to be found, nor does our present experience of drugs give hopeful anticipation that we shall find it; but I repeat that where the poisonous effects are produced in a minor degree, or where the secondary consequences are to be dealt with, we may do much to aid the natural powers in bringing about recovery."

In conclusion, fully acknowledging the value of recent researches, I would express a hope that the subject may receive further vigorous investigation, and that efforts may be prosecuted especially in the direction of search for some method of increasing elimination of the poison, of ascertaining the exact nature of the lesions of the nervous system and blood, and how far they are removable. As to local measures, with the view of preventing entry of the virus into the circulation, and of neutralising it *in situ*, improvements on the present method may be sought for.

As to advance in the investigation of the physiological and chemical aspects of the question, much may still be done, as also in respect of the chemistry and microscopical characters of the virus itself, and the blood and tissues of the poisoned. But these inquiries, of such importance to the human race, can, I fear, make but little further progress whilst the present restriction on physiological research continues to be maintained.

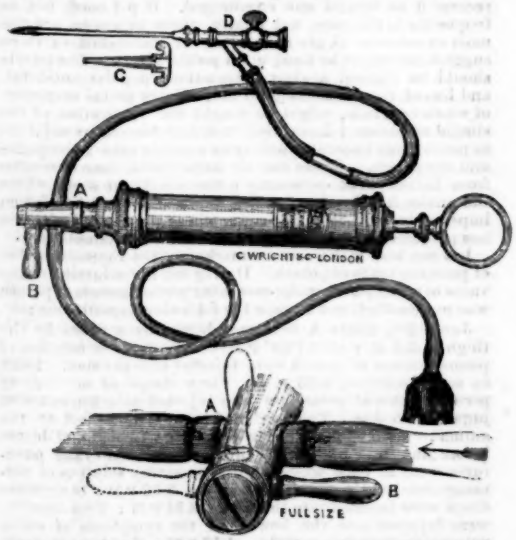
A review of the subject of snake-poisoning would be quite incomplete without acknowledgment of the valuable labours of such Indian observers as Drs. Shortt, Nicholson, Ewart, V. Richards, Wall, Stradling, and Stewart, who have added materially to our knowledge. Also of Dr. Halford in Australia, Dr. de Lacerda in Rio, Dr. T. L. Brunton in London, and of Drs. Weir Mitchell and Reichart in America, who are even now engaged in a most important and much-needed investigation into the chemistry of the poison and the condition of the blood and tissues of the poisoned.

[3] Dr. Lacerda has probably operated only with crotaline snakes; and if so, has not had the opportunity of observing the difference of action exerted by colubrine poison. In my experience repeated experiments show that direct general contamination may follow even when no large vein has been penetrated.

IMPROVEMENTS IN SYRINGES.

BY R. FITZROY BENHAM, M.R.C.S., &c.

HAVING observed for some time past the great inconvenience and expense one experiences in having to use various forms of syringes for the innumerable purposes for which they are required, both in medical and surgical cases, I have been induced, in consequence, to modify the mechanism of the extremity of the ordinary type of syringe, so that one syringe may be used for numberless different purposes—for instance, whether it be required to wash out an abscess cavity or to syringe a wound, to aspirate the bladder or to perform paracentesis, for the transfusion of fluids, or the injection of an enema, &c. The modification to which I refer will, I have no doubt, be readily understood from the diagrams. A is a hollow T-shaped piece of metal, which is adapted to the ordinary syringe in the place of its nozzle, C. The handle, B, is attached to a coned plug in which there is a rectangular aperture, so that by turning the handle B, either to the left or to the right, the way, so to speak, is opened to either the inlet or the outlet aperture, or *vice versâ*, as desired. To the end of each transverse extremity of A a piece of thick rubber tubing is attached, as in the ordinary aspirating or flute-action syringes. To one extremity of the tubing a hollow weight is connected, whilst at the other various attachments may be adjusted. For instance, if the syringe be required for the purpose of washing out a cavity or syringing a wound, the nozzle, C, of the syringe may be connected with the extremity of the flexible tube, and thus fluid may be driven in either direction by simply turning the handle, B, to the left or to the right, at will. Again, if it be required to perform paracentesis, or to aspirate the bladder, the nozzle, C, may be replaced by an ordinary cannula and trocar, D, as shown in the diagram. Thus it may be seen that by simply applying various attachments to the extremities of the tubing any ordinary syringe may be at once adapted for the various purposes. Apart from the advantages to be obtained as above described, by simply applying this modification or addition A to an ordinary syringe, it may be mentioned: 1st. That the direction of the inlet or the outlet being in a line, instead of rectangular, as in the case of the



ordinary stomach pump with its flute action mechanism, it is impossible for one aperture to be opened before the other is completely closed, notwithstanding they may be of considerable size. 2nd. No matter how small the extremity of the nozzle, C, may be, it does not impede the flow of the fluid when the syringe is being refilled—a point, I venture to think, of considerable moment where a large quantity of fluid is required, as in the case of syringing a wound after operation, thus saving time and the annoyance of unscrewing or detaching the nozzle from the extremity of the syringe before refilling the latter. 3rd. When the nozzle of the syringe is at once *in situ* it may be allowed to remain so until it is no longer required, whereas with the ordinary syringe it must be replaced every time it is refilled. 4th. As there are no valves or complicated mechanism the working parts cannot possibly get out of order or become corroded. 5th. The attachments, A, may be applied to all existing syringes by simply causing the size of its screw to be made to correspond with the nozzle, while other portions, such as a cannula and trocar, may be adapted at will. In conclusion I may state, for the information of the profession, that Messrs. C. Wright and Co., of 108, New Bond-street, London, have in stock various sizes of the attachments as above described, and that on their receiving an ordinary syringe they will adapt them accordingly.

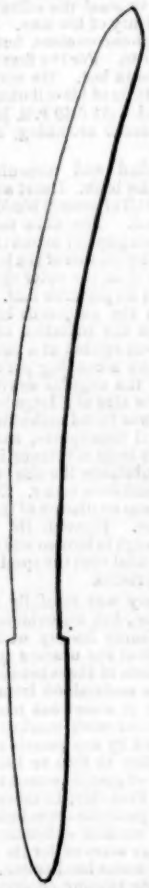
Baron's Court, S.W.

A NEW FORM OF UTERINE BOUGIE.

BY H. MACNAUGHTON JONES, M.D., F.R.C.S.I. & ED.,
EXAMINER IN OBSTETRICS IN THE ROYAL UNIVERSITY OF IRELAND, LATELY PROFESSOR IN THE QUEEN'S UNIVERSITY, IRELAND.

DILATATION of the uterine canal for intra-uterine medication, for sterility, and for obstructive and so-called spasmodic dysmenorrhœa comes constantly within the province and practice of every general practitioner. One of the soundest therapeutical steps I know of in gynæcological therapeutics is the application of nitric acid to the cavity of the fundus uteri in such abnormal conditions as corporeal and cervical endometritis or in subinvolution. Here the uterine isthmus should be dilated. Again, in those tedious cases of anteflexion with stenosis of the isthmus or contraction complicating sterility, dilatation is called for, and the step must be carried out by the ordinary medical attendant. All practitioners are familiar with the use of the usual tents, laminaria and tupelo. I have had greater satisfaction with the latter than the former in practice. On two occasions I have seen dangerous and alarming symptoms follow the use of laminaria tents. Uterine colic, symptoms of collapse, violent pain, and syncope occurred within four hours after the tent was introduced. Quite recently I placed a laminaria tent of small size in the uterus of a lady suffering from endometritis, with contracted isthmus, preparatory to the use of nitric acid. I remained away six hours. I experienced the greatest difficulty in its removal. The tent had swollen above and below the constriction into an hour-glass form. I had to bring it away with forceps. Such cases are apt to be followed by various degrees of metritis. Frequently practitioners have expressed to me their dislike to use sea-tangle tents from similar consequences following their employment in their hands. In cases of sterility, for some years past I have several times dilated the uterine canal with soft conical metal bougies—the same as those used by Mr. Teevan for male urethral dilatation—and pressure, and which I have found so beneficial in those semi-strictured conditions accompanying chronic gleety discharges. For dilatation of the female urethral passage, these bougies of mine will be found to answer admirably. They are easily kept clean, a few rubs with chamois leather give a bright surface, the bulbous end is of great advantage, combined with the conical form of the instrument. Struck with their value for uterine dilatation, I have had made by Mr. Hawksley a set of bougies which any practitioner can use, and which he will find most efficient in dilating the cervix under any of the circumstances above referred to. They will be found to glide easily into the uterine canal, and their ease of introduction is facilitated by the momentum gained from the solid metal. The accompanying woodcut shows five sizes of the bougies. The exact curve is represented. This is nearly similar to the curve of Hegar's dilators, that I have been using, and which I have obtained from M. Kumerle of Freiburg. Trying both forms of dilator on the same patient, and at the same sitting, I can vouch for the less degree of sensitiveness caused by the solid bulbous instrument. Fig. 1 shows in outline the shape and size of one of the smaller ebony dilators of Hegar, No. 9. The advantage of the conical and bulbous extremity over this

FIG. 1.



Sizes in Millimetres.

Bulb.	Belly.
8	11
10	13
12	16
13	20
13	23
14	25
14	28
15	30
18	33
20	40
25	53
29	59

FIG. 2.

Reduced to two-thirds size.

Entire instrument, reduced a little more than half size.

instrument is, I think, at once apparent. Each of my bougies has stamped on the brass mount the maximum circumference in millimetres of the belly of the bougie. Below are the relative sizes in millimetres of the bulb and belly of each bougie. They are curved to a portion of a circle of twenty-five centimetres in diameter, but this curve can be altered at the will of the operator, as the bougie is quite pliable from the junction of the handle to the point. The same handle can be adapted to each bougie. They can be used through any speculum. The dozen bougies fit into a portable flat case. The belly of the second largest bougie brings the canal up to the calibre of the finger. I have not yet used the three larger sizes of these particular bougies. I have had them made, however, to complete the set. They would be required for exploring the cavity of the uterus. It is rather for the purposes above indicated that I venture to suggest these dilators. I should, perhaps, mention that I have also used from time to time the smaller dilators of Dr. Matthews Duncan. I cannot refrain from quoting the opinion of our eminent gynæcologist when he says: "The treatment by bougies I recommend to you, because it is unaccompanied by danger. The only evil I have ever seen from it is a temporary perimetritis. It is a treatment the innocence of which arises from the fact that there is no cutting, and that the instrument is not left in the womb above a few minutes at a time."[1]

Dr. Priestley's dilators are well known, but they are different in shape and character from those here represented, as are also, as in mode of application, the admirable dilators of Mr. Lawson Tait. I am at present engaged in trying to complete a uterine fixer and tractor, to use for steadying the uterus during simple dilatation and while employing intra-uterine medication, which I hope very shortly to place before the readers of THE LANCET.

Harley-street, W.

A CASE OF

GUMMATOUS TUMOUR IN THE SUBSTANCE OF THE CEREBRUM.

UNDER THE CARE OF

G. E. WALKER, MEDICAL OFFICER.

BY ARTHUR PRICE,

ASSISTANT SURGEON H.M. CONVICT PRISON, PARKHURST.

THE doubtful nature of the symptoms uncomplicated by any motor paralytic lesion to the end, in the following somewhat unusual case, may possess sufficient interest to be recorded.

T. L——, a prisoner, thirty years of age, was on February 14th, 1883, admitted into the infirmary complaining of pains all over his body, but especially in his head, which was not referred to any particular spot. The pulse was 72; temperature normal. He was treated with bromide of potassium and tincture of gelseminum without any good effect until February 26th, when he stated that the headache had suddenly left him. He was discharged from the hospital, being readmitted for a short time on March 12th. On June 1st he was complaining of the recurrence of the great pain in his head. Pulse 72; temperature normal. As he was looking very ill he was again sent into hospital, and the following history was obtained from him. He had been a driver in the Royal Horse Artillery for some time, he was discharged from the army on account of having received a sunstroke whilst serving in India, and since then he had suffered from occasional attacks of intense cephalalgia. They were now described as of a piercing character, especially referred to the vertex of the head, accompanied by tinnitus aurium. He complained that the sun made him giddy, but he received relief when he had a handkerchief suspended from the back of his cap. No vomiting occurred at this or any other time. He had had gonorrhœa twice, but not syphilis. Did not remember having any sore-throat nor spots on the body. He was carefully examined; no trace of any chancre could be seen, no amygdaloid enlargements of inguinal glands, no evidences of syphilitic sore-throat. On June 21st he appeared collapsed; the pulse fell to 45, and the temperature to 97·5°. He was treated with brandy, iodide of potassium, and bromide of ammonia. He gradually rallied, and on July 7th the headache had quite disappeared, the prisoner in appearance being better than usual. On Sept. 21st he was again readmitted, having in the interval been treated nearly every day with iodide of potassium. The symptoms were now more urgent; the pulse was 45, temperature lower than normal. He could not stand without support in consequence of vertigo. The expression of face was that of suffering, and he had difficulty in expressing himself; the impairment of speech was central, being of amnesic type. There was no loss of sight, but some photophobia. On Sept. 25th it was noticed that his gait was rather tottering; he could pick up a pin with ease; his pupils were equal and the tongue was protruded in the median line. During the night of Sept. 30th he was found upon the floor of his cell; he stated that he fell down but could not explain how, nor what time he was on the floor. In all probability the fall was the result of an epileptiform convulsion. He was removed to the open ward, and the next day it was noticeable that his replies to questions were inconsequent and indefinite. From this time he steadily and rapidly proceeded from bad to worse. He would persistently get out of bed to try to steal the other patients' food, although he had and ate plenty of his own. On Oct. 12th he was in the morning semi-unconscious, but tried to answer questions if loudly spoken to. For the first and only time he passed his urine and fæces in bed. He managed to get up and tried to drink the contents of his cell utensil. The pulse was 40; temperature normal. At 5.40 P.M. he became suddenly unconscious with stertorous breathing, and died twenty minutes later.

Necropsy.—Body well nourished and muscular. The lungs were slightly congested at the back. Heart sound, but both ventricles and auricles were full of venous blood. Liver and kidneys sound but congested. The dura mater was injected and adherent at the following spots: across the fissure of Silvius, right side; at the posterior portion of the left base of the cerebellum and a large patch upon the outer side of the left hemisphere of the cerebrum at its posterior half. Where adherent in the first two places the subjacent brain was slightly softened, probably due to the irritation of minute gummata in the dura mater. Upon section at a point corresponding with the lower part of the ascending parietal, the lobule of the supra-marginal and the angular convolutions, a tumour, somewhat jelly-like, the size of a large hen's egg, weighing two ounces and a half, was found embedded in the white substance of the left cerebral hemisphere, surrounded by markedly softened and diffluent brain substance, involving also a patch of the grey cortical substance the size of a crown piece, which was covered by adherent dura mater. Elsewhere the brain was healthy, and there was no disease of the vessels nor tubercular deposits at the base. Through Dr. Allchin, Dr. Heneage Gibbes was kind enough to harden and examine a portion of the tumour, and he stated that the specimen was decidedly syphilitic in its characteristics.

Remarks.—The syphilitic history was carefully inquired into, as such lesion was suspected, but no evidence being present it was eliminated. The family history with regard to tuberculosis was also good, so that the obscure symptoms were entirely attributed to the effects of the sunstroke. The iodide and bromide treatment was maintained from first to last, with occasional blisters. It is somewhat remarkable that in this case so large a tumour with marked cortical softening should not be complicated by any paresis of arm or leg, nor any impairment of sensation in face or limbs. As the disease advanced the difficulty of speech seemed to be due to loss of the memory of words. Probably, in this case, the mischief being more evident in the posterior convolutions, and only very slightly involving the cortical substance of the ascending parietal convolution, may account for its want of agreement with Professor Ferrier's motor localisation. Moreover, how can a solitary syphilitic tumour occurring in a patient of thirty years of age, without any previous history of acquired syphilis, be accounted for? Could such have been hereditary and remained through life quiescent until irritated and started into active existence by the sunstroke?

[1] Duncan: Diseases of Women, p. 140, chap. on Spasmodic Dysmenorrhœa.

CITY OF LONDON TRUSS SOCIETY.—The seventy-seventh annual festival dinner of this Society was recently held, when it was stated that the number of patients had risen from 227 in 1808 to 9126 in 1883, being 313 beyond the number relieved in 1882 and the largest number ever recorded as having been relieved in one year during the existence of the charity. During 1883 the expenditure exceeded the regular income by £600. Subscriptions amounting to over £530 were announced during the evening.

AMPUTATION OF THE PENIS.

BY D. C. DAVIDSON,
SURGEON, INDIAN MEDICAL DEPARTMENT; ACTING HEALTH OFFICER, BOMBAY.

WHILE in charge of the Civil Hospital at Kaira, a few months since, two cases of complete amputation of the penis with removal of the scrotum came under my observation. One had been sent by the police for post-mortem examination, the other for treatment in the hospital. Both had been performed as a religious ceremony by some low caste Hindoos. This, I may observe, is a most unusual practice in English territory, though not uncommon in some native States; in fact, the magistrate who investigated the case, and who had had very extensive experience of crime in various parts of Guzerat, informed me that he had not previously heard of such an occurrence. At the same time, two others whose genital organs had been removed in a similar manner some time previously, and who were implicated in this matter, were committed to the Kaira district gaol, of which I was superintendent and medical officer. They were in excellent health, had no difficulty in micturating, and the wounds had entirely healed. Whether they had any means of dilating the urethra if it should contract I do not know, but there was no evidence of contraction while they were in the Kaira gaol. The man on whose body I held a post-mortem examination had died of hæmorrhage. The patient admitted for treatment in hospital did well. The entire penis and scrotum had been closely shaved off with an instrument somewhat resembling a large shoemaker's knife, leaving a clean healthy wound, which healed by granulation, without a bad symptom. There was no retention of urine, and no contraction of the urethra took place. Whether, as in the other two cases, the removal of the penis so close to the pubes prevented to a certain extent the tendency to contraction, is a subject worthy of consideration and investigation.

Some years ago, while I was in charge of the Civil Hospital at Shikarpur, a man was admitted under my care suffering from gangrene of the penis, due to syphilis. It was in a shocking state, smelling badly, and infested with worms. Amputation was performed and the man did well, but he insisted upon going out, and returned with the part in a very bad condition; extensive sloughing had set in, and the patient died from exhaustion. In this case the urethra had begun to contract.

During the time I was senior house-surgeon to the Birkenhead Borough Hospital, a man was admitted who, while suffering from delirium tremens, removed his own penis with a razor. He suffered severely from hæmorrhage previous to admission, but ultimately did well. In this case there was a considerable tendency to contraction of the urethra.

It is difficult to understand why, in cases where amputation is performed by uneducated natives upon each other, contraction of the urethra does not usually occur.

Bombay.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem estatis pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

MOIST SPREADING GANGRENE OF FOOT AND LEG IN A MAN AGED SIXTY-THREE; AMPUTATION IN LOWER THIRD OF THIGH; RECOVERY; REMARKS.

(Under the care of Mr. RIVINGTON.)

JAMES B——, aged sixty-three, sack assorter, was admitted on Nov. 20th, 1882. About a month previously the patient had experienced some tenderness in his foot, followed by swelling, and the trouble became aggravated about a week before his admission in consequence of his foot slipping as he was walking up some steps. This slight accident occasioned a great deal of pain in the part, and from that time the foot became very uneasy, and gradually got worse. When he entered the hospital there was great swelling of the foot both above and below. Sloughing had commenced four days previously, and sensation had disappeared on the plantar and dorsal surfaces. Mr. Hingston, the house-surgeon, made five or six incisions on the dorsum and a poultice was applied. By the 28th the gangrene had extended to the ankle-joint. The skin of the leg presented an inflammatory appearance to within a couple of inches of the knee-joint, and the limb was œdematous. The glands in the groin were enlarged. The patient said he felt well. Temperature 99·2°; pulse 88; bowels open; neither albumen nor sugar in the urine; sp. gr. 1017.

Nov. 29th.—Mr. Rivington amputated the leg immediately above the knee under the carbolic spray; long anterior, short posterior flaps were made. The arteries were atheromatous.—30th: The edge of the anterior flap was found to be gangrenous, with a suspicious dusky redness extending upwards. Tongue dry and slightly brown; temperature 101°; pulse 84.

Dec. 2nd.—Gangrene of anterior flap had spread. On the following day the stump looked better, and a line of demarcation had formed. Some of the stitches had separated. By the 6th the stitches had all given way, and the flaps had retracted. The carbolic dressings had been abandoned; the stump was thoroughly irrigated, powdered iodoform was dusted over it, strapping used to approximate the flaps, and cotton-wool and bandage applied. The patient slept and ate well. He wandered a little on one or two occasions. From this time the wound granulated healthily; the bone, which had protruded after retraction of the flaps, became gradually less prominent as the edges of the flaps approached each other during the healing process. On the 20th a ring of the femur came away in three pieces. The wound gradually healed, and the patient left the hospital on March 25th, 1883.

Remarks by Mr. RIVINGTON.—The foregoing is the case to which I referred in the discussion at the Medico-Chirurgical Society on Mr. Hutchinson's paper on High Amputation for Senile Gangrene. It will be observed that the actual onset of the gangrene followed the twist of the foot, the part being in a swollen and critical condition, and that the gangrene was of the moist description. I believe that amputation saved the patient, although, of course, it is not possible to assert this positively. Neither can any very definite rule be laid down as to the choice of amputation, or leaving the case to nature in senile gangrene. In some cases where the patient's arteries generally are diseased, when pressure induces gangrene of the soft parts over prominent points of bone, and when the patient appears broken down and worn out, amputation would speedily extinguish life; but, on the other hand, I am persuaded that some of the many cases which have died when left to nature would have had their lives prolonged by operation. As regards the seat of amputation for gangrene of the foot and lower part of the leg, the lower third of the thigh appears to me to be the safest and best place, as in cases which follow plugging of the femoral artery the gangrene rarely extends beyond the lower part of the thigh. Here the vitality of the part is greater, the healing powers more active, and there is far less liability to a return of the disease than there would be below the knee. In my own experience amputation in the lower third of the thigh is a very successful procedure, especially with antiseptic precautions. Whether high amputation should be resorted to or not in other forms of gangrene is not so clear. In traumatic cases and septic cases I have generally amputated immediately above, but clear of, the disease, and I followed this practice in a case of double amputation for gangrene from frost-bite with a successful issue, and without the recurrence of gangrene or sloughing of the flaps. As some high authorities advocate non-interference in gangrene from frost-bite, and cases of the kind are of infrequent occurrence in our climate, I append a brief account of the case.

GANGRENE OF BOTH FEET AND LOWER THIRD OF THE LEGS FROM FROST-BITE; DOUBLE AMPUTATION BELOW THE KNEES; RECOVERY.

(Under the care of Mr. RIVINGTON.)

John W——, thirty-five, a sailor, was admitted on January 30th, 1881. The foot and lower third of each leg were gangrenous, the result of tramping through the snow with insufficient covering to the feet. The right leg was in a state of moist gangrene, whilst the condition of the left leg

more resembled dry gangrene. The line of demarcation was well marked on each side. The affected parts were encased in charcoal poultices.

On Feb. 1st Mr. Rivington removed both legs at the junction of the upper and middle thirds under the carbolic spray by nearly equal anterior and posterior flaps, consisting chiefly of integument and fascia. On the 5th it was noted that the discharge from the right stump had a decidedly septic smell, but by daily irrigation and syringing the aseptic condition was restored by the 9th. At this time the patient was doing well and taking a chop for dinner. By Feb. 22nd the edges of the left stump had healed all round, and healing was progressing favourably on the right side. In each case the edge of the bone caused ulceration of the skin over it.

On March 7th antiseptic dressings were abandoned.

On April 5th the patient left the hospital well. The general range of the temperature after the amputation was from 99° to 101°. On admission the temperature stood at 102°, and it rose to that point twice after the operation—viz., on the evenings of Feb. 3rd and 9th.

WESTMINSTER HOSPITAL.

REMARKABLE HISTORY OF HÆMOPHILIA; EXCISION OF THE BREAST; RECOVERY; REMARKS.

(Under the care of Mr. MACNAMARA.)

FOR the following notes we are indebted to Mr. Radmore.

Mrs. T——, aged fifty-one, was admitted into the Westminster Hospital on Dec. 19th. Dr. E. Casey, of Windsor, gave the following particulars of this patient's family:—Two of Mrs. T——'s brothers and two sisters died of epistaxis all about the same age—namely, fifty-one years; also her mother and two uncles died of epistaxis. And yet further, an aunt and a brother now living suffer from it. This brother has three sons, two of whom frequently bleed from the nose; their father also bleeds from a small red spot on his tongue. There was no history of bleeding from wounds. One of her relations was known to have coughed up blood, another died of diabetes. Mrs. T—— is a stout, strong-looking woman; she has always had remarkably good health, but when young had several severe attacks of epistaxis. She has had several of her teeth extracted, the operation not being attended with any unusual amount of hæmorrhage. About three months ago Mrs. T—— first observed a tumour in her left breast; it has since grown rather rapidly, and she complains of a dull, aching pain in the part. The tumour is extremely hard; it is movable, the skin is not implicated, there is no retraction of the nipple, and the glands in the axilla are not enlarged. The kidneys, heart, and other organs appear to be all perfectly healthy.

Remarks.—Mr. Macnamara observed that, with reference to this patient, she was one of that class of cases in which removal of the breast should be undertaken without delay. It was impossible to be certain as to the exact nature of this tumour before the operation, but it was equally certain, supposing it was a carcinoma, if allowed to grow until the symptoms indicated its nature positively that the time would have passed for successful interference. In all these the danger of excising the breast is so slight compared to the risk run of leaving the morbid growth to infect surrounding tissues, that we cannot too strongly insist on an early operation. The question in this particular case was as to how far the risk attending the operation was increased on account of her remarkable family history. This history, however, afforded no evidence of hæmorrhage from wounds, but solely of epistaxis; in these circumstances the operation was undertaken. The amount of bleeding from the wound was certainly not greater than is usual in such cases. The wound healed almost by the first intention, and the patient left the hospital ten days after the operation.

SAMARITAN HOSPITAL, BELFAST.

FOREIGN BODY (A HAIR-PIN) IN THE BLADDER FOR TWELVE WEEKS (?); REMOVAL; RECOVERY.

(Under the care of Dr. M'MORDIE.)

FOR the following notes we are indebted to Dr. H. O'Neill.

S. G——, aged thirty-three, a farmer's daughter, living about sixteen miles from Belfast, was admitted to the hospital on Monday, Dec. 17th, 1883, complaining of pain over the bladder, and in the vagina, much increased immediately after micturition, but remaining more or less severe and continuous, and which prevented her from stooping or lying in any position but on the back. The symptoms were first observed on the morning of Sept. 30th last, about 10 o'clock. Twelve weeks before admission she quite suddenly felt difficulty in micturition, pain over the bladder after micturition, and the urine suddenly stopped before the bladder was empty. She said she could not account for these symptoms, although she could tell definitely when these symptoms began. She still continued at her household duties for about four weeks, when the symptoms above mentioned became so severe, especially the pain after micturition, that she remained in bed from that date till her admission into hospital. The catamenia first appeared at seventeen years of age and continued regularly every month since then. The patient suffered acute pain during the first day of each period across the loins and hypogastrium; each "period" lasted three days. About four ounces of bloody discharge escaped during that time. She suffered occasionally from leucorrhœa. She had had cataract of each lens for the past eleven years and had five needle operations performed for the cataract in the year 1879; slight opacity of each lens remained. She was unable to recognise any person's features, but was able to walk about quite well where she was familiar with the place. Her father, aged sixty-four years, mother, aged fifty-eight years, four brothers and one sister are living and healthy. One sister died from scarlet fever, one brother died from hydrocephalus, and one sister died in infancy.

When admitted she looked strong and healthy, though she occasionally felt nervous; complexion dark, temperament sanguine. Her manner of life had been quiet; she was a total abstainer from alcohol, and took simple food. Pulse 80, full; temperature 98·6° F.; respiration 30; skin moist, tongue moist, red at the tip and edges, slightly furred (white) over dorsum; it felt firm; appetite good; bowels rather costive. The vagina was wide, and on passing the index finger along its anterior wall for about two inches a firm, hard structure was felt lying in the bladder, and placed obliquely from right to left. Its curved end was felt anteriorly and towards the right, and seemed like a piece of round wire.

On Dec. 21st the patient was placed on the operating table on her back and anæsthetised with chloroform. Dr. M'Mordie, assisted by Dr. John McCaw, then dilated the urethra with a Priestley's two-bladed dilator, passed his left index finger along the urethra into the bladder, felt the foreign body, introduced a pair of fine-bladed urethral forceps into the bladder, and seized and removed a hair-pin. The hair-pin measured three inches in length; the two sides were half an inch apart, and had been made with a number of twists in the centre of each side to take a firmer hold of the hair. It was black, slightly coated by a deposit of mucus, and weighed twelve grains.—29th: Pulse 80. She felt no pain during or after micturition since the fourth day after the operation. For a few days after the operation she complained of pain over the bladder. The urine was quite red-coloured. Now the urine is normal, and is quite strong, and she leaves for home in a few days.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Alcoholic Poisoning.—Bacilli and Cholera.

THE ordinary meeting of this Society was held on Tuesday last, Professor John Marshall, F.R.S., President, in the chair. Both the communications were of more than average interest. Messrs. Stanley Boyd, Arbuthnot Lane, Newton Pitts, and Charles Stonham were elected Fellows of the Society.

The Secretary read Dr. BROADBENT'S paper on Alcoholic Poisoning. A case occurring in a gentleman, aged forty-two, was related. He had developed a liking for wine in early manhood, and had gradually become inert and sedentary, spending most of his time in bed, in reading, and in drinking port. In 1875 he was placed under the care of Dr. Harrison of Shepherd's-bush-green, as a dipsomaniac. He never had pronounced delirium tremens, but had been wakeful and

nervous, and for some months before his final illness had been failing in mental power. The paralysis came on very insidiously; the arms had been noticed to be weak for a fortnight, but there had been no great interference with the use of his hands in holding his paper or conveying drink to his mouth till within a few days of the first consultation between Dr. Harrison and the writer on April 3rd, 1883. At this time the paralysis was chiefly manifest in the extensor muscles of the forearms, giving rise to double drop-wrist, but the flexors were also weak and the muscles of the trunk were enfeebled, and although all movements of the legs were freely effected in bed, he could not stand alone. The knee-jerk was lost; the sole reflex marked. Sensation was unimpaired; the sphincters were not affected. A special peculiarity was the pale, puffy, purplish condition of the hands; while the feet, when hanging down, could be seen to swell. The urine contained neither albumen nor sugar. The pulse was frequent, small and weak, but regular. The first sound of the heart was short, and was followed immediately by the second at too brief an interval; there was no valvular murmur. A week later the paralysis had so far increased that the hands lying alongside the body could not be placed upon it, and the legs could not be drawn up in bed. There was also obvious paralysis of the diaphragm, which soon gave rise to respiratory distress and to difficulty of speaking. Next day the lower ribs, which had previously expanded well, only moved upwards with inspiration, and death took place from asphyxia on April 11th. On post-mortem examination of the cord (which was all that was permitted), it was found to be remarkably pale, but its consistence was normal, and no change could be found on microscopical examination, which was carefully made by Mr. Silcock. Other cases, essentially similar, had been seen by the writer with the late Dr. Rhodes of Weymouth, in a lady aged about fifty; with Dr. Myrth of Harrogate, in a lady aged about thirty; with Mr. G. Amos Duke, in the wife of an inn-keeper; in a deserted mistress in St. Mary's Hospital; and in a gentleman aged thirty-nine, with Mr. Wheeler of Chiswick. In another case, seen with Dr. Morton, the later symptoms did not altogether correspond with those described. In all alcohol had been taken in unusual excess, and the writer considers himself justified in considering it as the cause. Most of the patients were females of a sedentary mode of life, and the case described was that of a gentleman who scarcely ever went out, and spent most of his time in bed. It is thought probable that the absence of exercise is the determining cause of the alcohol affecting the cord. The disease most resembles acute ascending spinal paralysis, differing chiefly in the order in which the different parts of the cord are attacked, the double wrist-drop at an early period being highly characteristic.—The PRESIDENT spoke of the conspicuous summary of symptoms of alcoholic poisoning, which had been so presented as to be easily carried in the mind. Differences of opinion might be entertained of the pathology in the absence of definite microscopical changes.—Dr. SAMUEL WILKS was much interested in alcoholic poisoning, which might affect one organ rather than another in different individuals without one being able to give the reason for such differences of action. Alcohol, in his opinion, acted on the whole cerebro-spinal system, though the spinal cord might be more affected in many cases. No changes had hitherto been found in the true neural substance of the brain or cord, though these organs might be wasted and their meninges thickened. Dr. Wilks was very familiar with cases of alcoholic paraplegia; he was constantly meeting with cases which recovered when the alcohol was properly withdrawn. It had been said that alcohol produced profound degeneration of all the tissues with tendency to fibroid change, and so it was possible to expect chronic inflammatory changes in the cord. He had recently seen three cases all exactly alike, which presented the symptoms of amyotrophic lateral sclerosis. In one of these complete recovery ensued, and it was difficult to understand how the lateral sclerosis could have disappeared if it had been present. Dr. Wilks doubted whether there was any typical case which could be pointed out as resulting from alcoholic poisoning. Dr. Broadbent had described what he called a typical example, but it was open for Dr. Wilks to say that his cases of contracture were typical. Cases of spinal paralysis varied a good deal from one another, and the symptoms would no doubt vary according to the part of the cord involved.—Dr. BUZZARD thought the paper of interest therapeutically, clinically, and pathologically. Alcoholic disease of the spinal cord was by no means a new disease. Twelve years ago Dr. Wilks had written in THE LANCET on it, and Dr. Handfield Jones in the *Practitioner* for 1881. At the Royal Medical and Chirurgical Society, Dr. Reginald Thompson in 1868 read a paper on paralysis of the extensors, in which, no doubt, great alcoholic excess played a part in the production of the palsy. He (Dr. Buzzard) had seen a great many cases, all of which had a general resemblance to one another. Lancinating pains in the limbs of exquisite severity had been noted by him, whilst Dr. Broadbent had remarked on the absence of pains in his cases, though hyperalgesia was observed by both physicians. Like the previous speaker, he thought that there was a certain amount of variety in the forms assumed by this disease. In one case there would be extreme muscular wasting, which was not seen in others; contracture would sometimes follow, and often not; the mind might be clear or clouded; œdema of the extremities, probably from vaso-motor paralysis, had usually been marked. He (Dr. Buzzard) had published facts on the electrical reaction of cases of alcoholic paraplegia; there was great diminution, even to loss of reaction to the faradaic current, with exaggerated response to the galvanic current. These facts showed the disease to be of "spinal" order, and were in strict analogy with what had been observed in cases of generalised lead palsy. The marked wrist-drop was also noteworthy in this relation. In 1882 Lancereaux published some cases in which the signs of degenerative atrophy were found in the radial and posterior tibial nerves, in the peripheral parts of nerve trunks, whilst the cells in the anterior horns and the fibres of the spinal nerve roots were intact. The pathology of atraumatic peripheral neuritis had been worked out by Lancereaux, Déjérine, Pitres, Vaillard, and others, and recently Erb had worked at the subject. In 1880 Mr. de Watteville had suggested that a dynamic change in the cells of the anterior horns of temporary character might be sufficient to cause degenerative changes in the peripheral parts of the nerve fibres; that view had been adopted recently by Erb. It was well worthy of consideration. He (Dr. Buzzard) had never seen a fatal case of alcoholic paraplegia, but had witnessed some remarkable recoveries; some cases even had got well, and relapsed when the habit of drinking was taken to again. He did not think that want of exercise was of much importance in the etiology; two cases of Lancereaux occurred in women who worked hard, a dairywoman and a waitress. In the acute ascending palsy of Landry the electrical reactions mentioned did not obtain a sufficient distinction between the two diseases. He (Dr. Buzzard) had never found any optic neuritis in his cases. This so far went against the view of alcohol causing an inflammatory change in nerve trunks.—Dr. WILKS said that his cases had suffered from neuralgic pains; and Dr. Anstie had many years ago pointed this out.—Dr. BUZZARD also stated that in some of his cases there was a low kind of delirium.—Dr. BARLOW had had four cases under his care. They were all females; their ages were twenty-six, thirty-one, thirty to forty, and sixty. There was hyperalgesia, but he could not remember whether neuralgia was present. Some had contractions, but not so marked as in cases of lateral sclerosis. There were no changes in the pupils or fundus oculi. Both lower and upper extremities were affected, and in all cases there was some degree of cerebral affection—muttering delirium, hebetude, or thickness of speech. Three recovered, and the one aged thirty-one died, probably from want of proper precautions.—The PRESIDENT regretted and apologised for the absence of Dr. Broadbent, whose cases seemed to stand in some respects—e.g., their rapid fatality—in marked contrast with the cases of Drs. Buzzard, Barlow, and Wilks.

The following is a short description of the Microscopic Preparations sent to the President by Dr. STRAUS of Paris. The preparations consisted of—1st. Two preparations of the rice-water stools of cholera patients, stained with gentian violet. There would be found in these an innumerable host of organisms of every kind, none of which presented anything very characteristic. 2ndly. Eight sections of the small intestine (principally of the ileum) made from specimens hardened in absolute alcohol. These sections had been stained with methylene blue, and were mounted in Canada balsam. Those which were marked No. 1 came from a patient who died on the fifth day of the attack; No. 3 was taken from a patient who died at the end of the second day; No. 18 from one who died thirty-six hours after the commencement of the disease; No. 23 from one who succumbed at the end of the third day; Nos. 12 and xii. from a patient who, having had marked typhoid reaction, died thirteen days after the first attack. Most of the autopsies were

made immediately after death. The latest amongst those from which the specimens were taken was that from which No. 18 was obtained, which was made seven hours after death—this period even being too late in a country so hot as Egypt. Upon these sections there would be found: First, a complete desquamation of the epithelial covering of the villi and of the intestinal mucous membrane. Secondly, in the substance of the mucous membrane, in the tissue of the villi, in the lumina of "Lieberkühn's follicles," and here and there in the submucous tissue itself, various schizomycetes stained with methylene blue. The greater number of these were bacilli, and amongst them there was one which was the most frequently met with, short, thin, and straight, and which is probably that which M. Koch has likewise seen, which he compares with the bacillus of glanders, and which he believes to be the cholera organism. "However, I dare not affirm," writes Dr. Straus, "that this is the organism seen by M. Koch, for that observer has not given the technical method employed by him in order to stain his microbe; but, for my part, it is more than probable that this latter is the same as that which is found in such great numbers in my preparations." Besides this bacillus, however, there was to be met with in these preparations another larger one, also some short, thick bacteria, besides numerous micrococci, situated in the substance of the intestinal mucous membrane.—Mr. VICTOR HORSLEY had satisfied himself of the presence of all the organisms mentioned by Dr. Straus, both in the deposit from the rice-water stools and in the vertical sections of the intestine. He had detected in the not very thin sections bacilli, bacterium termo, and micrococci. There were no organisms in the muscular coat, but the submucous and epithelial coats contained plenty. In the submucosa micrococci existed in small zoogloea-like masses, which were situate either in the ground substance or in the lymphatics. Short and thin bacillary rods were detected in the walls of Lieberkühn's crypts, as well as in the lumen, but none had been found in the blood or lymphatic vessels. Koch and Straus had hitherto met with only negative results from inoculation experiments.—Mr. MACNAMARA spoke of the origin of the epidemic of cholera in Egypt. He firmly believed that no evidence had been brought forward to show that cholera ever originated *de novo* in Egypt. It had occurred in that country, but never before had it spread from India or Europe. He went entirely against the view expressed in Earl Granville's despatch, and referred to the work of Parkes and Netten Radcliffe as showing how difficult it was to trace out the source of contagion. If that were so, how much more difficult, not to say impossible, was it for any medical man in a foreign country, with no knowledge of the language spoken by the common people, and weeks after the outbreak of the disease, to arrive at any accurate conclusions as to how the first cases occurred. He had received a letter from Prof. Koch on Feb. 8th from Calcutta, which said, "The standpoint adopted by you completely agrees with the consideration of cholera as a parasitical disease, and we are therefore in perfect accord in regard to the principal point." Failing the production of the disease in the lower animals, he continues: "There are other lines upon which evidence may be traced that cholera is contracted through specific micro-organisms. I believe that I am already in possession of the evidence, and we have already succeeded in holding the parasites isolated in pure cultivation and in instituting experiments with them." Mr. Macnamara said he had held to the doctrine of the origin of cholera from micro-organisms since 1866. He thought it was much to be regretted that no English observers had joined in the work which was being prosecuted so ably by Koch and Straus.—Dr. GEORGE THIN said that, as a subsidiary line of research, the systematic examination of the intestinal mucous membrane in various diseases and at different intervals after death, with special regard to the forms of microbes present, would prove of much value, but would require enormous labour.—Sir JOSEPH FAYRER most emphatically declared that he did not believe in the communicability or contagiosity of cholera. He had formed this opinion as the result of a very long experience and close observation.—Dr. BUCHANAN had read Koch's paper very carefully. Koch had first made a morphological research, and, having discovered a certain bacillus, proceeded to cultivate the same and then to perform inoculations, which up to the present had yielded only negative results.—Surgeon-Major TIMOTHY LEWIS, assistant professor of pathology at Netley, had long been aware of the presence of the micro-organisms in the intestines and rice-water stools of cholera; but he did not hesitate to say that not one of the bacilli shown in the preparations before the meeting could be said to be peculiar to cholera. So far as his own observations and those of his former colleague, Dr. Douglas Cunningham, went, there was no evidence whatever of the contagiosity of cholera. With Cunningham, he had shown that healthy tissues might contain micro-organisms. In cholera there was sometimes but little effusion into the intestinal canal, and no obvious pathological changes.—Dr. MACLAGAN remarked on the possible absence of diarrhœa in cholera, on the very early degenerative changes mentioned by Bastian in the shed epithelium, and on the difference between the terms contagium and communicability, and said that he considered cholera as of the nature of a fever.—Sir JOSEPH FAYRER repeated his former statement in answer to Dr. Maclagan's criticism on the difference of the terms (contagiosity and communicability).—Prof. LEWIS explained that he had ligatured the renal artery, removed the kidney and plunged it immediately into paraffin. Examination of the renal tissues two days later showed innumerable bacteria and bacilli, whereas in the other kidney, when examined in the fresh state, no bacilli could be detected.—Dr. HENEAGE GIBBES related a case of "purples" in a pig, which disease Dr. Klein had shown to be associated with organisms. The liver was not usually affected, but Dr. Gibbes had found the liver infiltrated throughout with bacilli; the intralobular vein was replaced by a mass of pus in which long chains of long rods and chains of shorter rods were to be seen. These bacilli must almost necessarily have developed during the life of the animal. Lately he had been investigating the intestines and lymphatic glands of cases of typhoid fever, and had found bacilli of every size and shape, but nothing very specific. In one of Dr. Straus's preparations he observed a bacillus which resembled one he had found in the intestine of a case of typhoid fever in an early stage—a bacillus formed of two rods joined by a small process between them, and each having a blunt edge.—The PRESIDENT briefly replied, and it was agreed that a committee hould be appointed to examine Dr. Straus's preparations.

CLINICAL SOCIETY OF LONDON.

Obliterative Arteritis.—Primary Syphilis with Acute Pyrexia.

AN ordinary meeting of this Society was held on Feb. 8th, Sir A. Clark, Bart., President, in the chair. The papers of Mr. Pearce Gould and Dr. Hadden excited prolonged debate.

Mr. PEARCE GOULD related the history of a case of Spreading and Obliterative Arteritis, the patient being shown. It occurred in a young man, aged nineteen, in whose family and personal history there was nothing to throw light upon the cause of the disease. The illness began in May, 1883, when the patient noticed the fingers of his right hand becoming dark in colour. When warm the hand was of a deep red colour; when cold it became first blue, and then dead white, and there was then great pain in it. After three weeks he rested from his work (in a brick yard) for three weeks; but, again, after working for a month, the hand became worse, and he had to rest for a month. He then thought himself well, but, on resuming work, "the pain went" into his forearm and elbow, and since then he had been unable to work. He was admitted into the London Temperance Hospital on Oct. 31st. The right forearm and hand were colder than the left—somewhat wasted; while the hand was warm he could wash with it, but it quickly became cold and painful; the pain was always worse at night. The brachial artery in its whole course was harder than the left, and less affected by the pulse, which ceased in it just above the elbow-joint. The radial artery was felt as a prominent, hard, pulseless cord; there was no pulse in the ulnar artery. The other arteries of the body appeared normal. There was a small patch of dry gangrene on the tips of each of the first, third, and fourth digits. The heart was normal; there was accentuation of the second sound over the aortic cartilage. The urine was healthy and the temperature normal. For about a fortnight there was no notable change, but then the pain increased, first at night, and then by day, until it became so severe that the patient writhed in agony, which was only partially subdued by repeated hypodermic injections of morphia and draughts of chloral and bromide of potassium. Concurrently with this the pulse in the brachial artery faded away, until the vessel formed a

hard, pulseless cord as high as one inch below the teres major tendon. On Nov. 23rd the right subclavian artery was noticed to be very prominent above the clavicle, and the heart's action was excited. In December the pain lessened, and by Dec. 17th was but slight, while the prominence of the subclavian artery was diminished. Now he was quite free from pain, and expressed himself as quite well. Nearly the whole of the last joints of the thumb and of the right ring finger had mummified, and were nearly detached. The limb was considerably wasted; the radial artery had so shrunk as to be scarcely perceptible, and was quite pulseless; the brachial artery was still felt as a firm pulseless cord to within an inch of its origin. Mr. Gould stated that at no time had there been any œdema of the part, or any loss of sensation, the only paræsthesia being intense pain, particularly complained of in the parts which afterwards became gangrenous. The temperature was normal on the patient's admission to hospital, but on Nov. 26th was found to be pyrexial, and it continued so, ranging between 99° and 101° until Dec. 18th, when it finally returned to the normal. On one occasion the temperature rose to 101·8°. Mr. Gould remarked that the history and progress of the case plainly indicated that the disease was a progressive obliteration of the arteries of the right upper limb, probably starting in the hand and spreading almost up to the axilla. There was no source of embolism discoverable, and the slow progression, and the marked induration of the vessels before pulsation was lost, were sufficient to exclude simple thrombosis, especially in the arteries of the upper limb of a young man of this age. He believed that the disease was a primary inflammation of the arterial coats—arteritis obliterans—such as that described by Friedlander, and had been examined very carefully in one case by Winiwarter. Jaesch and others had reported similar cases, and the disease strongly resembled that described by Heubner in the cerebral arteries in syphilis. The present case, however, was especially noteworthy, as occurring at an earlier age than any before recorded, and affecting the upper rather than the lower limb. There was no history or evidence of syphilis in his patient, and Mr. Gould was unable to fasten on the cause of the affection. It was important to notice the very small amount of gangrene that resulted from so extensive an obliteration of the main arteries of the part.

Dr. W. B. HADDEN read notes of a case of Obliterative Arteritis. An unmarried woman, aged thirty-five, was admitted, under Dr. Bristowe, at St. Thomas's Hospital, on Feb. 22nd, 1882. There was nothing of importance in the family history, and no reason to suspect syphilis. The patient had been accustomed to sleep with an invalid child, and her arm, which was placed around the child, used to hang outside the bedclothes. Six months before admission she had severe pain in the right arm, shooting down the hand; and two months before admission the tips of the first and second fingers were hard and cracked. On admission she was a healthy, well-nourished woman, without any visceral disease. She complained of constant pain, but occasionally shooting, in the thumb and first and second fingers of the right hand. The fingers were pale and cold, and on the tip of each there was a flat, irregular corn. The thumb was pale, cold, and stiff, and the top was hard and thick. There was no pulsation in the radial and ulnar arteries, and the former was hard and tender. Pulsation was felt in the arteries at the bend of the elbow. Subsequently pulsation could not be felt in the lower part of the axillary, and there was tenderness along the whole brachial. The hand and arm became very cold, and the fingers livid. Surface temperatures were taken, and it was found that the right upper extremity was much colder than the left. Later the tenderness in the course of the arteries became more excessive, and the absence of pulsation extended higher into the axillary artery. The skin over the ends of the thumb and first three fingers became gangrenous, and was separated. Finally, pulsation returned in the brachial as far as the end of the elbow. Six months later the patient wrote to say that she was quite well, but that there was no pulse at the wrist. Prolonged pressure on the arteries seemed to be the exciting cause, just as it was sometimes in the case of a nerve. The favourable termination, as in paralysis, was worthy of note.

Dr. MAHOMED spoke of the necessity of watching both the cases narrated. Mention was made of the case of a man who suffered pain down one arm with anginal attacks, and who had a thrill and bruit in one subclavian artery. At the autopsy obliterative arteritis of the subclavian, aorta, and coronary arteries was discovered. The pulse tracing was one showing a diminished calibre of the artery. Aneurism was the diagnosis made during life.—Mr. THOMAS BRYANT thought it was difficult to be certain that the case was not one of thrombosis and consequent arteritis. He was much struck with the presence of the bony deposit or extra rib; this might be considered to have set up irritation, which resulted in thrombosis and arteritis. In Dr. Hadden's case localised pressure might also have produced some thrombosis and sequent arteritis.—Mr. HARRISON CRIPPS was also inclined to regard the bony deposit in the neck as liable to press on the subclavian artery and so produce a feeble circulation and malnutrition, which would be followed by thrombosis of the artery beginning in the distal extremities of the vessel. He related the case of a man, aged twenty-one, who seemed to have developed an aneurism in consequence of pressure from an exostosis of the seventh cervical vertebra which had pushed forwards and compressed the subclavian artery. He felt that Mr. Gould's might be a similar case.—Mr. JONATHAN HUTCHINSON narrated briefly three cases which bore on the paper. The first was that of a syphilised gentleman who had pain down one arm and hand with blueness of the middle and ring fingers which very nearly went on to gangrene. In the second case the evidence as to arteritis was more clear. It was met with in an old man, aged eighty, who first complained that he could not wear his hat with comfort. Here the temporal arteries were distinctly tender, with feeble pulsation, and reddened skin over them. This went on to absolute obliteration of the arteries. There was no reason to suspect syphilis, but there was general arterial degeneration. The third instance occurred in a man aged sixty, who, after a slight burn of the fingers, suffered gangrene of the hand, coincident with, and probably produced by, obliteration of the arteries of the upper limb. The limb was amputated at the shoulder-joint, and the arteries were found to be completely plugged by a large solid blood-clot. The vessels generally were exceedingly tortuous, but there was no evidence of calcification of their coats. He thought Mr. Gould's case was one of arteritis obliterans, but he did not think it proved that it began in the interior of the vessel.—Sir ANDREW CLARK asked whether the relation of the osteoid mass to the subclavian artery was such that the artery could have been affected by it.—Dr. ANGEL MONEY had observed the signs of arteritis in the vessels of the spinal cord of a case of lead palsy.—Mr. JOHN H. MORGAN agreed with Mr. Gould that the case he had recorded was one of periarteritis. There was much pain along the course of the brachial and ulnar arteries, but no obliteration of the calibre. In Mr. Gould's case the gangrene commenced before the pain; this fact he considered to go against the notion that the arteritis was primary.—Mr. PEARCE GOULD, in reply, said the discussion had been mainly on the actual nature of the case. In answer to Mr. Morgan, he said there was pain before gangrene. Notwithstanding the tendency of the discussion, he still thought that inflammation was the main element, though he by no means denied that a certain amount of thrombosis accompanied the arteritis. Winiwarter had pointed this out. The cervical bony mass was almost symmetrical, and it was difficult to understand why the arteritis was unilateral if Mr. Cripps were right. He felt a difficulty in comprehending how pressure on the subclavian artery could set up thrombosis of the digital arteries. The arteritis began in the fingers and spread slowly upwards; in its gradual course the subclavian artery became much distended, and bulged forwards. This was probably due to the obstruction beyond. As the collateral circulation became re-established the tension of the subclavian subsided. He had carefully excluded syphilis in his paper, and also cases associated with atheromatous disease. Hence he did not consider Mr. Hutchinson's cases pertinent to the point at issue. He was surprised that no notice was taken of the remarkable increase in arterial tension with hypertrophy of the heart, which facts were observed as the arteritis became more extensive. This observation was not what would have been expected when we remembered what Dr. Roy had recently stated at a meeting of the Royal Medical and Chirurgical Society.—Dr. HADDEN said there was no bony growth about the clavicle of his case.—Sir ANDREW CLARK thought that the circulation being enfeebled by pressure on the subclavian artery might lead to thrombosis in the distant branches, as in cases of heart disease.

Dr. BURNEY YEO read an account of a case of Pyrexial Syphilis. This case was admitted into King's College Hospital on Oct. 10th, 1883, with symptoms of pyrexia—high temperature, with great diurnal fluctuations, twice

reaching 105° F., and four times 104° F., and averaging in the evening for three weeks from 103° to 104° F. The daily oscillations were often more than 6° F. The other symptoms were pains in the limbs and trunk, headache, thirst, sleeplessness, great debility, and rapid emaciation. Between a fortnight and three weeks after his admission symptoms appeared, chiefly on the back and legs, resembling imperfectly developed variolous pustules without the areola. Considerable doubt as to the nature of the case was at first felt, but after he had been in the hospital three weeks he confessed to one of Dr. Yeo's clerks that he had venereal sores on the penis. Antisyphilitic treatment was attended by a rapid fall of temperature to normal, rapid improvement of nutrition, and recovery of strength, and rapid drying up of the pustular eruptions. He left the hospital on December 20th, having been for some time quite free from symptoms of any kind. The chief peculiarities of the case were: (1) The great and continued elevation of temperature, and its great daily oscillations. (2) The early appearance of the pyrexia, within twenty-five to thirty days of the exposure to infection. (3) The absence of any definite relation between the temperature and the eruption, which was not fully developed till three or four weeks after the onset of fever. (4) The occurrence of profound constitutional affection without any noticeable induration about the local sores. Dr. Yeo, in conclusion, called attention to the opinions expressed by Sir William Gull, Sir James Paget, Mr. Hutchinson, and others, in the debate on syphilis at the Pathological Society, and referred to Güntz's observations on the pyrexia of syphilis. He also pointed out the important pathological analogies and practical suggestions to which a case like this gave rise.—Dr. MACLAGAN said a vesicular eruption was a very rare form of syphilitic manifestation. He suggested that the case was one of anomalous typhoid fever or some kind of blood-poisoning. Sir ANDREW CLARK had certainly seen severe fever with a vesicular eruption on the face, neck, and body of a syphilitic patient.—Mr. JONATHAN HUTCHINSON thought no doubt attached to Dr. Yeo's case. He said a high temperature was by no means uncommon in syphilis. An eruption as like variola as anything could well be was surely to be met with in syphilis. He was not so certain that the date of the infection fixed by the author was right, for other opportunities of infection existed. Still, although it was a shorter period than usual, he did not regard it as improbable. In answer to the President, Dr. Yeo said that Mr. Cheyne had not found micro-organisms in the blood.—Dr. DYCE DUCKWORTH had seen some cases of syphilis accompanied by pyrexia.—Mr. MORRANT BAKER asked what was the precise state of the penis and lymphatic glands; he thought it possible that the case was not one of syphilis.—Dr. SIDNEY COUPLAND said that with the ulcerated condition of the penis a septic poisoning might surely have been possible.—Dr. TONGE-SMITH had known a case with an eruption like that of variola to be sent as small-pox into the London Fever Hospital. Other symptoms and antisyphilitic treatment showed the case to be one of syphilis.—Mr. STRUGNELL had observed a similar case.—Sir ANDREW CLARK inquired whether profuse sweatings had been recorded.—Dr. BURNEY YEO replied that there had been sweatings before the patient came under observation, but not after. He might mention that Dr. Duffin had diagnosed the case as one of febrile syphilis as soon as he had seen it. No doubt it was a rare eruption, and really the patient diagnosed his own case. Dr. Yeo had purposely made light of the penile condition and enlarged lymphatic glands, but the ulcerated surface was not very extensive. The fact that mercury reduced the temperature and improved the nutrition was also of some value *quâ* diagnosis.

Mr. Pearce Gould brought forward a case of Gummata of the Back of the Neck. Dr. Stephen Mackenzie showed a drawing and case of Acne Varioliformis. Dr. Kingston Fowler exhibited a case of Symmetrical Malformation of both Hands, apparently due to shortening of the metacarpal bone of each ring finger. Dr. Charlwood Turner showed an an example of Keloid of the Front of the Chest.

MEDICAL SOCIETY OF LONDON.

Irreducible Hernia.—Lupus.

THE meeting of this Society, held on Monday last, was noteworthy from the fact that two senior members of the profession read papers on subjects of peculiar interest. Both the papers were received with marked attention. The President, Sir Joseph Fayrer, was in the chair.

Mr. THOMAS BRYANT read a paper on Irreducible Hernia. By this term he meant cases which were irremediable except by an operation. He first considered under what circumstances the reduction of a so-called irreducible hernia could be brought about. So long as the herniæ have not been the seat of some antecedent strangulation, incarceration, or obstruction, their final reduction was possible. The recumbent position, the use of saline purgatives, and the application of cold by ice bags or Leiter's coils were able to diminish the hernial contents and so aid in reduction. Mr. Bryant had treated herniæ thus persistently for days or weeks and had met with success and failure, the latter, he believed, from want of confidence in the result of such treatment. In hernia which had been down for from five to twelve weeks he had kept up the treatment for as long as nine weeks. These means did not endanger life. He next spoke of the truss for irreducible hernia which he had devised and had used in perhaps two dozen cases. A sound and simple principle guided the formation of the truss. A plaster-of-Paris mould was first taken from the hernia, and a metal case lined with washleather was constructed from this, so as to make a pad which could be fixed to a spring or belt. The pad, being a mould of the hernia, formed an efficient protection and guaranteed no increase in size of the hernia. The evidence of the value of the truss lay in his experience of twenty years. We must remember that every groin had its own special shape. The employment of the truss in all cases of reducible hernia ensured comfort with efficiency of action. Gutta-percha might be used to take the mould. The same means might be used for spina bifida or for the protection of any outgrowths.—Mr. PEARCE GOULD acknowledged that many herniæ were difficult and troublesome to manage, and here a pad made from an exact mould was most comfortable and efficient. He suggested that the mould might be so made that the pad should take the place of the weakened pillars at the neck of the hernia.—Mr. FRANCIS MASON asked whether complete success attended the use of the truss.—Sir JOSEPH FAYRER thought the truss would prove of great service. He felt sure that such additional means for treating large old incarcerated herniæ were very welcome. He had often employed, and still recommended, an incision in the tense pillar of the neck of such herniæ so as to allow of their complete reduction; and some form of plug to the inguinal canal might be of much value.—Mr. BRYANT, in reply, said he contrived first to get the hernia as small as possible before taking the mould. The employment of this principle had hitherto not been done systematically.

Mr. JONATHAN HUTCHINSON read a paper on Lupus. He thought that the term ought to include a group of diseases. Lupus vulgaris and lupus erythematosus only were generally recognised. These unquestionably ought to be associated under one name, for they possessed natural and close affinities. Also certain other rare affections ought to be placed in their company. Lupus originally included that malignant affection, rodent ulcer. It was now well recognised that lupus was a disease of the skin and mucous membrane only, and that it never tended to eat deeply. It was known that the lupus process showed very different tendencies in different cases. It was not uncommon to have lupus patches persisting for many years and spreading extensively without any tendency to ulcerate. The histology of lupus as an infective cell growth in the corium has recently been associated with a bacillus which was probably not causational. The definition of lupus should be a clinical one based upon the recognition of causes and modes of extension. The disease probably started as a common inflammation and got its diathesis from the patient. Its exciting causes were in many instances very definitely those which originated inflammation. In no cases did we recognise any probability that it was the result of contagium. When the lupus process was established we had an infective new growth which spread by continuity into the adjacent tissues, and which might spread very far away, though not to lymphatic glands or internal organs. This spread was probably consequent on infection through the lymphatic spaces of the skin. The secondary development might take place at great distances. Multiplicity might be primary, no doubt; but in lupus vulgaris we had cases of what might be called constitutional multiplicity, and tendency to symmetry was very rare. So infective was the disease that it rarely died out of itself. In this infective vigour it far exceeded the process of inflammation which one called

strumous. There was also a tendency to retrogressive change. The character of the scar would depend on the extent of the previous growth or infiltration. A slowly creeping and infective form of inflammatory new growth in the skin and mucous membranes, which invariably left a scar, would be a fair working definition of lupus. Rodent ulcer tended to ulcerate deeply, and had little tendency to form a scar. But syphilis would be included in the definition. Lupus erythematosus and lupus vulgaris were contrasted. The symmetry and situation of the former were very marked features. It had a definite tendency to symmetry without continuity of extension. This proved that the disease depended upon inborn peculiarity of structure involving susceptibility to very slight exciting causes. Lupus vulgaris spread only by direct continuity; and although it might become multiple, it remained conspicuously non-symmetrical throughout. An alliance with cancer in the case of common lupus, and with such diseases as chilblains and psoriasis in erythematosus, was suggested. But notwithstanding such strong lines of distinction there were connecting links. Mr. Hutchinson never saw a quiet patch of non-ulcerated lupoid growth. Here the disease is a mere inflammation with much swelling and with the development of papillary granulation processes The cellular tissue was more involved, and the resulting cicatrix was deeper. Amongst the varieties of common lupus the following were mentioned. 1st. Lupus occurring in single patches, slowly aggressive at their borders, with a tendency to cicatrise in the centre, but with little or no tendency to ulcerate or inflame, or to cause any infection of adjacent parts. These single patches might exist as such through half the patient's life. 2nd. Many-patched lupus. In these cases the secondary patches always begin near to the first, and there is never any exact symmetry. Ulceration may be present or wholly absent. 3rd. Lupus with ulceration. This, it must be admitted, is a very variable factor. Any variety of lupus may ulcerate, and the tendency to do so varies somewhat with the precise part affected. 4th. Lupus acne, the lupus follicularis disseminata of Dr. Tilbury Fox. 5th. Lupus eczema, a form of disease which begins as an eczematous process and ends as a lupus one; and which looks like an eczema throughout, but which leaves scars. 6th. The papillary form of lupus, the lupus verrucosus of M'Call Anderson. 7th. A condition of things which is a mixture of lupus eczema and the papillary form, and which produces an extraordinary mutilation of the digits, and may be conveniently known as lupus mutilans. 8th. A lichen lupus, or lupus marginatus. 9th. Lupus lymphaticus. 10th. Nævus lupus, a form of lupus originating in parts which were affected by congenital nævi. Kaposi's disease, xeroderma pigmentosum, was also considered as possibly of a lupoid nature. Numerous drawings and records of cases illustrated Mr. Hutchinson's remarks.—Dr. RADCLIFFE CROCKER said that he could not altogether agree with Mr. Hutchinson's definition of lupus. Syphilis could not be excluded. We must admit that different processes could produce like results. So that degeneration and pressure-atrophy might result from other than lupus processes. He recognised the truth of the clinical picture drawn so faithfully by Mr. Hutchinson, but considered that we ought to wait for more cases before coming to a definite conclusion. The multiplication of compound names led to confusion, and ought not at present to be persisted in. Lupus might be found to attack certain constituents of the skin. In acne lupus, so called, the sebaceous glands were found not to be specially involved. With regard to Kaposi's disease, he hoped to say a great deal at a future meeting of the Royal Medical and Chirurgical Society.—Mr. JAMES STARTIN and Sir JOSEPH FAYRER joined in the discussion, and Mr. HUTCHINSON briefly replied.

Mr. NOBLE SMITH showed a case of small Meningocele.

Dr. GODSON exhibited a mechanical nurse or "couveuse."

Mr. PEARCE GOULD exhibited a pathological specimen of Meningo-Encephalocele.

HARVEIAN SOCIETY OF LONDON.

A MEETING of this Society was held on the 8th inst.; Mr. George P. Field, President, in the chair.

Upon taking the chair for the first time as president, Mr. GEORGE P. FIELD addressed a few words to the meeting, congratulating the Society not only on its successful career in the past, but on its present prosperity, as shown by the number of its members and the sustained fulness of its meetings, and especially on the promise of its increasing usefulness in the future, of which no better proof could be given than the titles of the papers to be read at the ensuing meetings during the session. For much of this success the Society was indebted to the untiring zeal of the hon. secretaries, Dr. W. H. Lamb (whose labours had just come to an end) and Mr. J. Ernest Lane.

Subperiosteal Hæmorrhage in Infantile Scurvy.—Mr. EDMUND OWEN recorded a case of infantile scurvy, the full report of which was published in our issue of last week.—Dr. BUZZARD, from his experience of scurvy in the Crimean war, expressed the opinion that association with rickets was by no means necessary for the production of such a condition as that described by Mr. Owen. He had seen many instances of periosteal hæmorrhage occurring along the front of the tibia for example, and on the inferior maxilla in men suffering from scurvy alone. Nothing could be more important than the observations of Dr. Barlow, Dr. Cheadle, and others, upon the condition found in improperly fed children. Although usual, sponginess of the gums was not a necessary symptom of scurvy; he thought it might be absent in about 20 per cent. of the cases, even when the other features were very strongly marked. Another diagnostic point of great importance was the presence of ecchymoses, often overlooked or attributed to accidental bruises. The recognition and appropriate treatment of scorbutic affections rescued a patient from grave peril, and ensured a recovery remarkably rapid and complete.—Dr. CHEADLE stated that he had studied the disease in seven children, his observations having been the first to draw attention to the subject. He attributed the malady to the use of artificial foods, which lack the fresh vegetable quality, and are generally deficient in nitrogen. This evil should be met, in cases where cow's milk is not tolerated, by raw meat, meat juice, and potato-mash. He had, however, seen a case of infantile scurvy recover completely under the exclusive use of Swiss milk. He endorsed Dr. Buzzard's remarks concerning spongy gums; but in his experience bruises were not often observed.—Dr. SYMES THOMPSON alluded to the causation of pulmonary hæmorrhage from a scorbutic tendency, and gave an instance in point.—Mr. JOHN MORGAN pointed out that the subperiosteal hæmorrhages showed no tendency to suppuration in scurvy, and submitted that the hæmorrhagic affection might involve the medullary cavity of bone as well as the surface.—Mr. PEPPER suggested that effusions of blood such as were displayed in the specimens exhibited were not infrequently the artificial result of injections performed after death. It should be borne in mind in diagnosing rickets that beading of the ribs occurs normally at their pleural surface.—In his reply, Mr. OWEN stated that he had failed to discover in rickets that tenderness of the bones which Sir Wm. Jenner had described.

Deformities of the Fingers and Toes.—In an interesting paper Mr. NOBLE SMITH reviewed the following subjects:—(1) Congenital hypertrophy of fingers and toes; (2) deficiencies of digits; (3) rudimentary digits; (4) intra-uterine amputations, &c., by the pressure of the umbilical cord or of fine membranous bands; (5) budding of digits at the extremity of a stump; (6) double hand; (7) supernumerary digits; (8) cleft thumb; (9) union of fingers at the tips; (10) web formation; (11) permanent contraction of fingers. The etiology and the surgical treatment of many of these conditions were discussed in the paper, and illustrative drawings were circulated.—In the ensuing discussion Dr. J. Thompson and Mr. Pepper referred to the subject of maternal impressions, and after Mr. Noble Smith's reply the meeting was adjourned.

LIVERPOOL MEDICAL INSTITUTION.

THE eighth meeting of the session was held on Thursday, Jan. 31st, Dr. Gee, President, in the chair.

Croup.—Dr. GREVES showed the thoracic organs from a case of croup in a child aged two years. The symptoms dated fourteen days before admission into the infirmary, gradually becoming more severe. When seen, the inspiration was obstructed and croupy, the lips livid, the throat reddened but no false membrane visible, and the strength good. After three days' treatment the child was much worse, the soft spaces of the chest falling in at each inspiration, cyanosis increased, and the pulse intermitting with each

inspiration. Tracheotomy was performed, and a large cast of false membrane removed from the larynx, with immediate relief to the symptoms. The next day, however, the temperature rose to 105°, and on the following day the child died. At the post-mortem, a thin layer of fresh membrane was found extending from the larynx to the bronchi, and at the right apex there was recent pneumonia, which no doubt was the immediate cause of death. The cervical glands and thymus were enlarged. Dr. Greves thought that the interesting features of the case were the prolonged onset, the absence of paroxysms, and the pulsus paradoxus.

Splint for the Antiseptic Treatment of Compound Fractures.—Mr. PAUL introduced a case of compound fracture treated antiseptically in the splint recommended by him at a previous meeting. The patient, a boy aged fourteen, was admitted into the infirmary with the tibia protruding two inches. Under ether it was reduced and wired in good position. The skin of the whole leg was then rendered aseptic, and bandaged with several layers of gauze, leaving a good interruption at the site of the wound. Over the gauze a layer of paraffin bandage was placed, and then a five-feet length of the flat flexible iron rod, covered with indiarubber tubing, was accurately bent to fit the front and back contour of the limb, and was fixed in position by paraffin bandages, of course avoiding the interruption. All crevices between the skin and the splint, when left open for the wound, were carefully stuffed with cotton-wool saturated with hot wax and carbolic oil, the whole of the edges of the interruption being well painted with the same. The ordinary Listerian dressings were then applied. The boy had been perfectly comfortable ever since the splint was put on; and now, only a week after the injury, he had been dressed and brought to the meeting in a cab, without any inconvenience to himself. The wound was found to be filled up to a level with the skin with organising blood-clot, and was not suppurating.

Compound Dislocation of the Elbow.—Mr. RUSHTON PARKER showed a patient who fell downstairs, dislocating the bones of her forearm backwards, and thrusting the lower end of the humerus through the skin in front, rupturing the main artery and vein. There was complete restoration of the movements of the joint. She was brought to the infirmary directly after the injury, when the house-surgeon tied the brachial artery and veins, and made the wound aseptic. When Mr. Parker examined the case he found that on the slightest manipulation the dislocation returned, the lower end of the humerus protruding, quite bare of the muscles which should be attached to it. He left the wound quite open, applied Listerian dressings, and fixed the limb at an acute angle, simply by a sling from the wrist. He thought it a matter of great importance that such wounds should not be sewn up, and he very much preferred a sling to a splint for injuries to the elbow-joint. At the end of five days the patient could move her fingers freely, showing that the muscles separated from the condyles of the humerus must very soon have taken up a fresh attachment. At the end of four weeks the wound was entirely healed, and in another week the woman could not be persuaded to remain in the hospital any longer.—Mr. DAMER HARRISSON said that he had recently under his care a case exactly similar to the one described, except that it occurred in a child, and that the radial and ulnar arteries were ruptured just below the bifurcation, instead of the brachial. He treated it antiseptically, and on an angular hoop splint. The child recovered without a bad symptom, and with full restoration of the movements of the joint.

Traumatic Gangrene of the Arm.—Mr. RUSHTON PARKER also showed a man, aged fifty-three, whose arm he had amputated at the shoulder for gangrene following injury. The skin was divided along the line of separation, when it was found that the limb remained attached only by three nerves. The bone was disarticulated. The artery was already firmly plugged, and required no ligature. The wound subsequently became putrid, and was dressed with eucalyptus ointment. The sloughs in time all separated, and the stump was now as good as could be desired.

Dr. BARR showed a boy who had been very successfully treated for an Empyema, first by free incision, and afterwards by removal of a portion of the tenth rib.

Dr. BARR also exhibited a patient suffering from Mitral and Tricuspid Stenosis. He remarked that the combination of stenosis of both auriculo-ventricular openings was more frequently observed on the post-mortem table than diagnosed during life. This patient had been frequently under his care since August, 1880, first in Her Majesty's Prison, Kirkdale, and afterwards in the Stanley Hospital. The man was now twenty-seven years of age. About eleven years ago he had rheumatic fever, and five years subsequently he was in a hospital with what he says was called gangrene of the lung, but which was probably a severe attack of broncho-pneumonia, attended by fetid expectoration. When first admitted to the hospital in Kirkdale Prison he was suffering from somewhat similar symptoms, and there was also coarse pleuritic friction at the bases of both lungs. The expectoration had always been very abundant, and was often deeply blood-tinged. Auricular systolic murmurs were well marked in both the mitral and tricuspid orifices. There was also well-marked pulsation in the veins of the neck, of both auricular and ventricular rhythm. Dr. Barr exhibited tracings of this pulsation, which showed well-marked auricular and ventricular waves. The heart was much enlarged, extending from the apex in the sixth interspace to the left of the nipple, to the right of the sternum, and measuring seven inches transversely. The upper border of dull percussion reached as high as the second costal cartilage, and extended well to the left of the sternum, in the region of the left auricle. The dull percussion to the right of the sternum corresponded with an enlarged right auricle. There was slight presystolic thrill at the apex, and here there was a roughening, scarcely amounting to a murmur, preceding and accompanying the first sound and flowing away; from this there was a ventricular systolic murmur. In the tricuspid area there was now no presystolic murmur, but there was a slight systolic one. There was still slight pulsation in the veins of the neck, but it was now too feeble to give a tracing. The second sound was accentuated in both the pulmonic and aortic areas, and the pulse tension was very high; there was no doubling of the second sound. The hepatic dulness was very much increased. Other organs and urine normal. Dr. Barr looked upon the tricuspid lesion as somewhat beneficial in this case, as it tended to maintain a more even balance in the systemic and pulmonic circulations, and prevented that great dilatation of the tricuspid orifice, which would otherwise be certain to take place in this case, where there was not merely obstruction from mitral stenosis, but also from the broncho-pneumonia and emphysema.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Discussion on Albuminuria, its Pathology and Clinical Significance.

A SPECIAL series of meetings for the discussion of the above subject has been arranged, the first of which was held on the evening of Tuesday last, the 12th inst., when Prof. McCall Anderson, the President of the Society, occupied the chair. A large number of medical men of Glasgow and the West of Scotland, as well as visitors from a distance, attended the meeting. The President, after some preliminary remarks as to the order of the discussion, requested Dr David Newman to introduce the subject.

Dr. NEWMAN remarked that in the brief time at his disposal it was not possible for him to discuss the whole pathology of albuminuria; he would therefore content himself by bringing under the consideration of the meeting one or two points in connexion with the relationship of albuminuria to the morbid structural changes in the kidney, and the questions which presented themselves most prominently for discussion appeared to him to be—(1) Why does the urine not normally contain albumen? and (2) What are the renal changes associated with the presence of albumen in the urine, and how do they explain its absence from the urine in health and its presence in disease of the kidney? After describing the normal structure of the kidney and the physical conditions concerned in the secretion of urine, he drew attention to the circumstance that in certain diseases the lymphatic spaces in the kidney became enlarged (parenchymatous nephritis), while in others they were obliterated and obstructed by inflammatory products (interstitial nephritis). After enumerating the various theories which had been advanced to explain the physiological secretion of urine, he supported the idea that along with the other constituents of the urine albumen filters through the glomeruli, but is reabsorbed by the tubular epithelium when

the kidney is healthy. But when the nutrition of the epithelium has been interfered with and its function impaired, the albumen which would have otherwise been absorbed escapes. He illustrated his remarks by describing two cases—one of interstitial, the other of parenchymatous, nephritis; and showed why in the former the quantity of urine was large and the amount of albumen small, whereas in the latter the opposite conditions obtained. The polyuria was explained by the fact that in interstitial nephritis the lymphatics are obliterated and the capillaries are separated from the tubules by inflammatory new formations. These circumstances interfere with the reabsorption of the watery constituents, while the changes in the epithelium permit a certain portion of the albumen to pass. The diminished elimination of urine in parenchymatous nephritis was explained by the fact that in this disease the lymphatics are enlarged, the epithelium desquamated, and the capillaries in close proximity to the urine contained in the tubules, so that osmosis towards the lymphatic and vascular systems is facilitated. The principal causes of albuminuria resulting from organic lesions of the kidney appeared to be: (1) increased tension in the glomeruli, from whatever cause arising, whether from increased afferent pressure or undue efferent (capillary or venous) resistance; (2) inflammatory or desquamative changes in the renal epithelium, the first causing an increase in the escape of albumen from the blood, and the second interfering with the proper reabsorption by the uriniferous tubules. These facts, together with the circumstance that inflammatory exudation may escape into the tubules either from their own walls or from Bowman's capsules, when the Malpighian bodies are the seat of acute inflammation, account for most of the cases of albuminuria when the kidneys are the seat of structural changes.—Professor W. ROBERTS of Manchester said that albuminuria was met with in various diseases and also in perfectly healthy persons, and this class of cases should be more inquired into. He would refer to two points in connexion with the albuminuria of Bright's disease. 1. When albuminous urine is added drop by drop to a large quantity of water a milky trail follows each drop, and at last the whole fluid becomes opalescent. This opalescence disappears on the addition of an acid or alkali, and is probably due to the presence of globulin or paraglobulin. 2. Albuminuria associated with hypertrophy of the left ventricle is usually permanent; but he drew attention to a case which was an exception to this rule. He afterwards discussed physiological albuminuria in its various aspects, and gave an outline of the usual course of events in such cases, referring briefly to several which differed considerably from the type he had described. He believed that in a large majority of individuals there was a normal insensible albuminuria which was only to be appreciated by the most delicate methods of testing, and regarded the so-called cases of physiological albuminuria as an exaggeration of this condition. He believed that for the detection of albumen the older methods, by heat with acetic acid and by nitric acid, were more to be relied upon, if carefully carried out, than any of those more recently advanced. He also stated his opinion that picric acid might give a reaction due to the presence of mucin where no albumen was present.—Professor HAMILTON of Aberdeen drew attention to the fact that it had been accepted that the capillaries of the kidney, unlike those of other parts of the body, had the power of resisting the passage of albumen through their walls. He stated that Ludwig had advanced the theory that albumen did pass through the glomeruli, but that most physiologists had refused to accept this view. Heidenhain propounded the theory that the epithelium of the glomerulus had the power of preventing the escape of albumen into the tubules, although it passed through the vessels of the tuft. It was believed by the supporters of this view that the lymphatics surrounding the glomeruli carried away the albumen which had thus transuded. But he (Dr. Hamilton) did not commit himself to any of these views. Heidenhain supposed that in cases of physiological albuminuria the nutrition of this membrane was interfered with by a poison. In cases of albuminuria in valvular disease of the heart, the usually received opinion was that the albuminuria arose from retardation of the circulation in the venous system. Cohnheim, however, considered that anæmia, by causing malnutrition, encouraged the appearance of albumen in the urine. He (Prof. Hamilton) thought that the older opinion was probably the correct one. He then discussed some physical experiments performed by Runeberg to show that the quantity of albumen which filtered through an animal membrane under pressure had a direct ratio to the pressure employed up to a certain point, which point being exceeded the percentage of albumen in the filtrate diminished rather than increased, and on again lowering the pressure the amount of albumen increased.

The discussion will be continued on Tuesday, the 19th inst., by Professors Gairdner, Greenfield, Drs. Mahomed, Mortimer Granville, and others.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE quarterly meeting of this Association was held at Bethlem Hospital on Tuesday, Feb. 5th, Dr. Orange presiding. At the commencement of the proceedings allusion was made to the death of Dr. Parsey, medical superintendent of the Warwickshire County Asylum, and one of the former presidents of the Association, and a resolution of condolence with his family was passed. Dr. Savage read a paper on Constant Watching of Suicidal Cases, which was followed by a paper by Dr. Gasquet on some of the Mental Symptoms of ordinary Brain Disease, and one by Dr. H. Major on the Results of the Collective Record of the Causation of Insanity. Considerable discussion arose on each of the papers.

Reviews and Notices of Books.

Untersuchungen über die Semiologie des Harns. Ein Beitrag zur Klinischen Diagnostik und zur Lehre vom Stoffwechsel. Von Dr. W. ZUELZER. Berlin: Hempel. 1884.

IN this treatise we have another instance of the surprising industry and patient investigation which are the characteristics of German scientific work. And in this case the labour has not, as so frequently happens, been expended in a direction barren of practical results. For, though perhaps the researches on which the author has bestowed so much time and attention have as yet excited but little interest among pathologists, devoted exclusively as they are to pure histology, the time must come when a reference to the daily and hourly variations of the urine as regards the relation subsisting between its nitrogenous constituents and its inorganic salts must be studied if we hope to explain the facts of histogenesis or unravel the mysteries connected with tissue metabolism in health and disease. Perhaps one of the most interesting points of Dr. Zuelzer's work is the graphic representations of some of these changes as they occur in muscular tissue, in the blood, in the brain, and in the urine, in animals fed with flesh, brain substance, and blood respectively. In this respresentation a circle denotes the whole of the constituents, divided into coloured segments, the nitrogenous elements being coloured red, whilst each acid and base has also its distinct colour. As might be expected, the amount of nitrogen and the respective relations and amount of the inorganic constituents vary considerably; but it is a matter of surprise to find that when animals are fed exclusively on any one of these substances, the acids and bases in the urine do not correspond to those of the tissue ingested. Thus an analysis of muscle shows only a small proportion of chlorine and sodium; but when an animal is fed exclusively on flesh, so far from the urine being poor in these constituents, the amount of chlorine is six times more than that represented in muscle, and sodium twice as much. But, strange to say, when the animal is fed on blood the reverse obtains. Blood, according to the figures, contains six times as much chlorine, and three times as much sodium as muscle; yet when animals are fed on blood the chlorine in the urine is two-thirds less than when the animal is fed on muscle. These, and other facts which the graphic representation puts before us, clearly show that the organism possesses regulative mechanisms with regard to the retention and discharge from it of the bases and acids. Another chapter which will be read with much interest is that

relating to what may be called the organic phosphorus in the urine, and the method of separating it. Very important conclusions are arrived at with respect to the composition of the urine, especially as regards the elimination of phosphoric acid in combination with bases, and that existing as glycerin-phosphoric acid. The chapter relating to the composition of urine in certain morbid conditions of the blood, as in scurvy, anæmia, pernicious anæmia, chronic kidney disease, paroxysmal hæmatinuria, and the like, exhibits amazing industry, whilst many of the conclusions obtained by the various analyses are of the highest possible value. With regard to scurvy, the author confirms Garrod's view as to the diminution of potash, but he found the phosphoric acid decreased as well, and also the sodium, though not to the same extent as the potash, whilst the lime and magnesia are scarcely affected. This is in accordance with Ralfe's observations in 1877, who, like Garrod, found potash to be diminished, but in addition pointed out the remarkable decrease of the phosphoric acid in combination with the alkaline bases, whilst that of the earthy bases was but slightly reduced. Ralfe regarded this diminution of the alkaline phosphates in scurvy as due to retention in the organism in order to supply the place of the alkaline carbonates cut off by the withdrawal of vegetable food. Zuelzer also demonstrates very clearly the fact that in chronic kidney disease the phosphoric acid has a low relative value to the other constituents of the urine, pointing in his opinion to retention in the organism. In pernicious anæmia all the inorganic constituents are greatly increased, especially the phosphoric acid. This he does not think is due to changes in the bone tissue, but to nervous influence. We regret that space will not permit us to dwell upon the many points of interest to be found in the remaining chapters of the book; but the reader will find much to engage his attention in the questions raised with regard to the excretion of the bone salts by the urine, the influence of the secretion of bile on the composition of the urine, and in the remarks on the process of nutrition.

On Malignant Disease (Sarcoma and Carcinoma) of the Larynx. By HENRY T. BUTLIN, F.R.C.S., Assistant-Surgeon and Demonstrator of Diseases of the Larynx, St. Bartholomew's Hospital. London: J. & A. Churchill. 1883.

THIS is an addendum to Mr. Butlin's work entitled, "Sarcoma and Carcinoma," or rather a second instalment of a work of which that was the first part. Its title fully explains its scope. The plan of the work is precisely similar to that of the earlier publication, and Mr. Butlin has only included in his purview cases which a careful microscopical examination has demonstrated to be sarcoma or carcinoma. The number of cases is thus reduced to seventy-three, but numbers may be sacrificed where accuracy is secured. The chief pathological dogma on which Mr. Butlin insists as the outcome of his work on sarcoma and carcinoma is that not only does the mother tissue exert an influence upon the structure and general characters of a tumour, but that it largely influences the degree and kind of malignancy presented by a tumour. In reference to sarcoma, it is held that the disease rarely, if ever, infects the lymphatic glands or becomes disseminated, so that local treatment of a radical kind, even in advanced cases, may be successful. Mr. Butlin thinks that this is because the sarcomata "arise by the proliferation of the cellular elements of the solid structures of the connective tissues," which compresses the lymphatics, and eventually leads to their complete obliteration. The treatment of laryngeal sarcoma is eminently satisfactory, provided not alone the prominent tumour, but the whole of its base, be completely removed. The fifty cases of carcinoma of the larynx show that Krishaber's classification of cases into "intrinsic" and "extrinsic" is valid and necessary. Extrinsic carcinoma usually spreads rapidly, infiltrates deeply, affects the lymphatic glands early, and resists all curative and operative treatment. Intrinsic carcinoma, on the other hand, is far less malignant, its course is slower, its tendency to infiltrate less marked, its liability to infect the lymphatics slight, and its radical operative treatment hopeful. Extirpation of the larynx is considered justifiable in cases of sarcoma and early intrinsic carcinoma of the larynx, and it is pointed out that in other cases not suited for this operation life may be much prolonged, and its comfort increased by tracheotomy.

OUR LIBRARY TABLE.

The Roller Bandage. By WILLIAM BARTON HOPKINS, M.D., Assistant Demonstrator of Surgery in the University of Pennsylvania, &c., with Seventy Illustrations. Philadelphia: J. B. Lippincott and Co. 1883.—The illustrations in this little manual are its chief feature; they are all drawn from photographs of actual bandages applied to the living model. They are in the main very good, and likely to prove useful to the student; but some of them are rather too small to be readily appreciated at a glance. We notice hat in several ways Dr. Hopkins' directions differ from those usually given by British teachers; in the bandage for the breast, for the groin, and for the elbow, for example, he carries the roller in exactly the opposite direction to that recommended by Berkeley Hill and other English surgeons. It may be insular prejudice, but we certainly prefer our English plan. It is undoubtedly an error that may entail grave results to represent the elbow bandaged with the limb at a wide obtuse angle; and this is a point on which it is very necessary for teachers to insist, as beginners are apt to overlook the importance of maintaining the joint at a right angle while putting on the bandage.

Brain: a Journal of Neurology. Part XXIV., January, 1884. London: Macmillan and Co.—This is a very readable number. It opens with the first part of an article by Dr. Grasset of Montpellier, intended to demonstrate the relation between hysteria and the scrofulous and tubercular diathesis, and he gives a large number of instances of hysteria in which there was tubercular heredity without pulmonary manifestations, reserving cases in which the nervous and pulmonary disease were conjoined to a second article. Dr. Buzzard contributes a paper describing a case of Posterior Spinal Sclerosis, with full histological details by Dr. Bevan Lewis, with the object of showing that the cord disease may (as it was in this instance) often be due to periarteritis spreading from the pia mater to the posterior columns. Dr. Beevor discusses the Relation of the "Aura" Giddiness to Epileptic Seizures; and Dr. Horatio Donkin relates a case of Anæsthesia in a Boy, in which he discusses the "hypothesis of shamming" as an element in such cases, but finally concludes to dismiss it in favour of a lack of "conscious sensibility." Dr. Byrom Bramwell contributes a digest of modern physiological discovery upon the innervation of the heart. Reviews, abstracts, &c., make up the number.

Zeitschrift für Biologie. Von W. KUHNE und C. VOIT. Band 19, Heft 4. — This part contains seven articles. 1. On the Excretion of Urea and of the Inorganic Salts of the Urine under the Influence of an Artificially Elevated Temperature, by Dr. C. F. A. Koch. 2. Do the Bones contain Keratin? by Dr. Herbert Smith. 3. Spectrum Analysis of the Consumption of Oxygen by the Tissues in Health and in Disease, by Dr. Dennig. 4. The Connexion of the Sheaths of the Nerves with the Sarcolemma, by W. Kühne. 5. On the Influence of Size of the Body on Metabolism of Tissue and Generation of Force, by Max Rubner. 6. A Second Memoir on the Question of the Development of Elementary Nitrogen in the Animal Body, by Dr. Max

Gruber. 7. On Volkard's Method of Testing the Chlorides in Urine, by Dr. Max Gruber.

Archives de Physiologie. MM. BROWN-SÉQUARD, CHARCOT, VULPIAN, and JOFFROY. Vol. III. Series 3. No. 1.—This part contains the subjoined memoirs. 1. On the Influence of Asphyctic Blood on the Nervous Apparatus of the Circulation, by MM. Dastre and Morat. 2. On the Motor Brain, by M. Couty. 3. Pathological Anatomy of Mammary Cystic Disease, by M. Brissaud, with two plates.

The Quarterly Journal of Microscopical Science. Edited by RAY LANKESTER, THISELTON DYER, KLEIN, MOSELEY, and ADAM SEDGWICK. No. 93. January, 1884.—This part contains several interesting memoirs; amongst others are the following: Notes on Echinoderm Morphology, by P. Herbert Carpenter. On the Homologies of the Primary Larval Plates in the Test of Brachiate Echinoderms, by Mr. Percy Sladen. On the Origin of Metameric Segmentation, and some other Morphological Questions, by Adam Sedgwick, with two plates. On certain Abnormalities in the common Frog, by Alfred Gibbs Bourne. Researches on the Intra-cellular Digestion of Invertebrates, and on the Ancestral History of the Inflammatory Process, by Dr. Elias Metschnikoff. On the Structures connected with the Ovarian Ovum of Marsupialia and Monotremata, by Edwd. Poulton. On the Skeletotrophic Tissues and Coxal Glands of Limulus Scorpio and Mygale, by E. Ray Lankester. An Improvement in the Method of using the Freezing Microtome, by J. Sollas.

The Birmingham Medical Review. February, 1884.—In this number Dr. Sawyer advocates the employment of some improved oleates, either in the form of a dusting powder or of an ointment. He has found much virtue in the zinc, lead, and copper oleates which have been made by Messrs. Southall, according to the methods devised by Dr. Shoemaker of Phialdelphia.

New Inventions.

A NEW BINAURAL STETHOSCOPE.

THIS instrument consists of an ordinary wooden or metal stethoscope, with a tube—which may be either indiarubber or metal—leading from the funnel-shaped portion—i. e., chest-piece. I find it best to use a wooden stethoscope, of which the stem, as well as the bore, is a perfect funnel. In this way, I think, both the wood and the column of air in the stethoscope conduct sound better than in the case of the stethoscopes sold in shops. An indiarubber tube is fitted into the stem, about one inch and a half from the extremity. In using this stethoscope, one ear is applied to the ear-piece in the usual way, and the indiarubber tube is introduced into the other ear. Instead of using indiarubber tubing, one might use metal; but this makes the instrument too cumbersome and expensive. It may be made in such a way as to fold up alongside of the stem. When indiarubber tubing is used it may be rolled round the stem of the stethoscope. The metal tubing is best used always with a metal stethoscope. Method of using: Introduce the indiarubber tube into one ear firmly. The tube should not be held in the ear with the fingers. The stethoscope is then applied to the patient in the usual way, and the other ear of the operator applied to the ear-piece. If possible the tube should pass behind the neck of the operator. At first sight it would appear that the tube, by rubbing against anything with which it comes in contact, would spoil the examination; but this is not the case, for it can easily be prevented from rubbing against anything; and even if it does it will give rise to no error. The stethoscope can be obtained from Mr. J. Gardner, surgical instrument maker, South Bridge, Edinburgh.

S. WERNICH,
Student of Medicine, Edinburgh University.

THE PAY SYSTEM AT GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—The topics discussed by Dr. Steele, under the above heading in your issue of Feb. 2nd, are of so much interest and importance to all who concern themselves with the subject of hospital administration that I trust you will be able to find room for the following remarks upon them.

1. The system of payments initiated at Guy's Hospital is not, as Dr. Steele would have us believe, the provident system of medical relief in any shape or form, but is simply, as stated in your annotation of the previous week, a transformation of the out-patient department of the hospital into a cheap medicine shop for the sale of advice and medicine at threepence a head. The arguments therefore, based upon the favour which the provident system has met with from the Charity Organisation Society and others, have really no bearing upon the system under discussion. Its closest analogy seems to be to those private ventures with which London is becoming filled, the so-called cheap dispensaries, where advice and medicine can be had for sixpence or a shilling a head, any connexion with which is eschewed by all respectable practitioners. I fail to see why a different rule should apply in the two cases.

2. The comparison between the cost of treating patients in a great endowed hospital like Guy's, and in a parish or union infirmary where it is admitted that they are admirably well cared for, deserves more full consideration than Dr. Steele has devoted to it in his letter. If it be true, as I have been assured on excellent authority, that while the cost per bed in the metropolitan union infirmaries averages £33, it rises to nearly £80 in Guy's and St. Bartholomew's, it is surely not sufficient to account for this enormous difference by reminding us that the latter are handicapped with out-patient departments, high-class nursing, parish and municipal rates, let alone the numerous adjuncts of a medical school. Neither the difference between high-class and low-class (but efficient) nursing, one would think, nor the rates, were they even heavier than they are, would make very enormous inroads upon an income of £30,000 a year; while the adjuncts of a medical school, whatever they may be, might, if they be not more than repaid by the gratuitous services of the students to the hospital, be very well left to be supplied by funds derived from sources other than charitable. The out-patient department is, therefore, on Dr. Steele's showing, the most important factor in more than doubling the difficulty of making £30,000 go as far in an endowed hospital as it does in a parish infirmary.

3. The admission made by Dr. Steele that there is nothing in the testamentary dispositions of the founder nor in the charter of the corporation which refers in any way to out-patients shows, as I have repeatedly urged, that that department is quite foreign to the original design of the great endowed hospitals. Writing ten years ago in *Fraser's Magazine* (August, 1874), I stated that there could be "no question that the intention of the founders of these institutions was to make, in the words of Mr. Thomas Guy, a perpetual provision for the maintenance and cure of such poor sick persons as were received into hospital, and that the whole out-patient department, which has had such an enormous development in late years, is something quite foreign to the work originally marked out for hospitals." If the question of legality could be raised therefore, I think it might go much further than either you or Dr. Steele seems to imagine.

4. The indifference of the Charity Commissioners will surprise no one who knows what almost incredible ignorance on hospital matters exists in official circles. So recently as during the last session of Parliament the Minister in charge of the Government Charitable Trusts Bill told a deputation that he had excepted from its action all charities deriving more than half their income from voluntary subscriptions, and that he thought this would include all hospitals!

I am, Sir, yours, &c.,

Dulwich, Feb. 9th, 1884. H. NELSON HARDY.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for successful vaccination:—Arthur P. May, M.R.C.S., Great Crosby; Mr. F. Felix Jones, Llanfyllin (first time); Mr. W. Inglis Mason, Sudbury, Suffolk (fifth time).

THE LANCET.

LONDON: SATURDAY, FEBRUARY 16, 1884.

THE first Report of the Royal Commission appointed in June, 1882, to inquire "into the effects of the discharge of the sewage of the metropolis into the river Thames," has just appeared, and is, we are glad to find, a document worthy of the "right trusty and well-beloved" Commissioners who have prepared it. The Commission was a strong one, both as to law and science, consisting in its final and enlarged form of Baron BRAMWELL, Sir JOHN COODE, Professor A. W. WILLIAMSON, Professor DE CHAUMONT, Dr. STEVENSON, Mr. ABERNETHY, Sir PETER BENSON MAXWELL, and Colonel EWART, the last two added in November, 1882; Mr. WILLIAM POLE, F.R.S., was appointed secretary. Fifty-nine meetings have to the present time been held, at forty-six of which witnesses have been examined. In all, 126 witnesses have given evidence, while an immense number more were offered. The evidence, together with the tables, maps, and plans which illustrate it, will form some bulky volumes, the scientific value of which will be very great indeed. We explained at the time of its formation that the Commission had for its object the investigation of complaints laid before the Government in regard to the condition of the Lower Thames. A "General Committee for the Protection of the Lower Thames from Pollution" had been formed, at the suggestion, we believe, of Mr. CHARLES BEADLE of Erith, who has from first to last devoted much time and expense to the object. Other bodies—the Erith Local Board, the Thames Conservancy Board, and, above all, the Corporation of London, as Port Sanitary Authority—joined in the application, and appeared before the Commission as complainants, for the most part by counsel. It soon appeared that most elaborate scientific evidence and a very considerable expenditure would be necessary, and the Corporation, with wise public spirit, took the matter into their own hands, and have fought the battle with energy and skill. If the pollution is before long removed, or greatly lessened, the credit will mainly rest with the City authorities. The defence of the present order of things fell of course to the Metropolitan Board of Works, who devised it. Their case, supported by skilful experts, and illustrated by an immense mass of experimental evidence, was also presented by counsel.

Three distinct subjects of inquiry were presented to the Commission: first, the system under which the sewage is now discharged; secondly, the question whether evil effects result from this discharge; and, thirdly, remedial or preventive measures. In regard to the first two of these questions, the Commissioners have arrived at definite, and we are glad to say satisfactory, conclusions, as they affirm in the strongest way the nuisance to which we have for so many years called attention. The third, and alas! the hardest, question remains for the present unanswered, the Commissioners very wisely reserving it for further study. We printed in our last number the summary at the end of the present report, which contains the most important of the Commissioners' conclusions in regard to the first two points. It will be noted, without surprise, that the study of remedial measures is to be postponed for a period not stated. We presume that a moderate time—a few months or so—is intended. Perhaps the Metropolitan Board will themselves undertake the task of finding a remedy for what they must now admit is a serious nuisance.

The Commissioners have divided their report, which occupies sixty pages, into three parts, entitled (1) Historical Notice in regard to the Drainage of London, (2) The System under which Sewage is discharged into the Thames by the Metropolitan Board of Works, (3) Whether any Evil Effects result therefrom. Space compels us to postpone our consideration of the last of these.

Sewers were used in England at an early period, but the first general Act controlling them was the Bill of Sewers, passed in the reign of HENRY VIII., 1531. A curious paper by Sir CHRISTOPHER WREN, in 1678, is quoted, which proposes improvements in "ye new sewers" in "St. Margarett's, Westminster." In 1732 the river Fleet, and soon after several other streams, were covered in, and converted into sewers. Readers of POPE will be reminded of the lines in the "Dunciad," written only three years before—

> "To where Fleet ditch with disemboguing streams
> Rolls the large tribute of dead dogs to Thames;
> The king of dykes! than whom no sluice of mud
> With deeper sable blots the silver flood."

At the beginning of the present century cesspools were universal, and the discharge of sewage into a sewer was penal. Between 1810 and 1830 watercloscts were introduced. At first they emptied into the cesspools, but by a natural transition they were soon allowed to discharge into the street sewers. In 1834 the artist JOHN MARTIN suggested the plan of intercepting sewers, afterwards adopted; but nothing at the time was done, and the sewage continued to flow into the Thames, whence, down to the year 1855, water continued to be drawn for the domestic supply of the metropolis.

In 1848 the eight separate and independent Commissions of Sewers at that time existent were by Act of Parliament merged into two, of which the City of London was one. Four other consolidated Commissions followed the first within a very few years; but owing to the conflict of authority which still remained no general system of drainage was adopted, although many were suggested, of which one or two, notably those of Mr. PHILLIPS (1849) and Mr. FRANK FORSTER (1850), foreshadowed the scheme ultimately adopted. In 1856 the Metropolis Local Management Act (1855) came into operation, which gave comprehensive and very stringent powers to a new body, the Metropolitan Board of Works. Assisted by their skilful engineer, Mr. (now Sir) JOSEPH BAZALGETTE, the new Board set to work to devise a scheme of drainage for the metropolis on the intercepting sewer system, originally suggested by MARTIN.

We come now to the point most material to the present inquiry. It was at first proposed that the sewage should be discharged in the northern district at Barking and in the southern at a spot on the Plumstead Marshes. Sir BENJAMIN HALL, the First Commissioner of Works, refused to sanction this scheme, as he had power to do under the Act on the

ground that the discharge would take place inside the metropolitan area. Captain BURSTAL was consulted, and he advised a lower site for the outfall. The Board admitted that they had considered plans for taking the sewage down below Gravesend, but had rejected them as too expensive. Three Government referees, Captain DOUGLAS GALTON, Mr. JAMES SIMPSON, and Mr. THOMAS E. BLACKWELL, were then appointed, who ultimately advised that the sewage should be taken down to the Lower Hope, below Gravesend, whence, in their opinion, it would easily reach the sea. In reply to this report the Board instructed Messrs. BAZALGETTE, HAWKSLEY, and BIDDER to prepare another, in which the views of the referees were combated and a definite selection of the present sites made. A somewhat acrimonious controversy followed, which lasted until nearly the close of 1858. Meantime Lord PALMERSTON'S Government had been succeeded by that of Lord DERBY, and the new Ministry succeeded with some difficulty in passing a Bill which left the Metropolitan Board free to select their own outfalls, subject only to the very important provision that they should be liable to indictment if they caused any nuisance. It seems to have been assumed that the Board would deodorise the sewage before pouring it into the river. No formal stipulation to this effect was made, but Lord DERBY and Mr. DISRAELI both spoke of it as an implied condition. Under this amended Act (1858) the new drainage works were carried out rapidly, and, as far as their first object was concerned, most effectively, and in 1865 they were formally opened by the Prince of WALES. From that time to the present raw sewage, in ever increasing quantities, has been thrown into the river without any serious attempt at deodorisation or even filtration. It will be seen by reference to the general conclusions to which we have already referred, that the present Commissioners make a strong point of the failure of the Metropolitan Board to carry out their implied promise to disinfect the sewage. They also point out that the original intention was to discharge the sewage "through submerged pipes terminating below low-water mark," whereas at Barking it is "discharged partly over the foreshore," with intolerable stench as the result. We shall discuss in another article the evils of the present system.

A VERY influential meeting has recently been held at Liverpool to consider "the present position of University College, and the steps necessary for completing its organisation, more particularly with reference to the conferring of a University degree upon its students." The practical outcome was the adoption of a resolution that, in the interests of higher education in Liverpool, and to secure to the inhabitants of the city and neighbourhood direct access to University degrees in Arts, Science, and Medicine, the incorporation of University College in Victoria University is an urgent necessity; and in order that this incorporation should take place as quickly as possible, large sums were promised and a fund started for the endowment of the additional professorships and lectureships required as conditions of the incorporation. It is evident that Liverpool is in earnest in the matter, that the necessary funds will soon be raised, and that University College will form with Owens College an integral part of the Victoria University. Leeds is sure to push forward the claims of the Yorkshire College of Science and the Medical School for participation in the right of having degrees conferred upon their students; and it is possible that other northern centres may follow. The power of granting degrees locally (which is now out of the question), or incorporation with the Victoria University, is a necessity for their existence as medical schools. We must therefore look forward to the fact that this University will practically be the future degree-giving body for the bulk of students in the north of England, who now go elsewhere for their degrees, or do not obtain such a distinction. When the authorities of Owens College first conceived the idea of becoming a University and conferring degrees, the chief arguments put forward were: that the University of London was merely an examining board, and did not supervise teaching, which is not the fact so far as candidates for medical degrees are concerned, for a very strict curriculum is laid down by the Senate; and that their course of education was practically ruled by another body, which interfered with its proper development. If students are taught at Liverpool and Leeds, and perhaps elsewhere, and then have degrees conferred on them by the University authorities in Manchester, these arguments become valueless, for students may as well be examined in London as at Manchester. Owens College by itself, as a degree-conferring as well as a teaching institution, might have some *raison d'être*, and the value of the degrees would be determined in due course; but the Victoria University in Manchester, with Colleges in Liverpool and Leeds, possessing equal rights and privileges with Owens College, is to us only a feeble reproduction of the University of London, with University and King's Colleges, and the other Medical Schools in the metropolis. As we have said again and again, we have already too many degree-granting bodies for the welfare of medicine. The institution of medical degrees by the new University has no sufficient justification if these are to be confined to students of Owens College; but when the candidates can be educated elsewhere, then the Manchester University will have wilfully abandoned the only ground on which its existence could for a moment be defended.

A CASE has arisen in the district for which Dr. SANDFORD acts as medical officer of health which has in many other districts led to a difference of opinion between sanitary authorities and their officers. Under an order of the Local Government Board dated March 11th, 1880, there occurs the following instruction to a medical officer of health who holds his appointment under the sanction of that Board: "On receiving information of the outbreak of any contagious, infectious, or epidemic disease of a dangerous character within the district, he shall visit the spot without delay, and inquire into the causes and circumstances of the outbreak; and, in case he is not satisfied that all due precautions are being taken, he shall advise the persons competent to act as to the measures which may appear to him to be required to prevent the extension of the disease, and, so far as he may be lawfully authorised, assist in the execution of the same." When this order was issued we commented on it and we pointed out that its terms, unlike those of one of its predecessors, gave officers of health a certain discretion as regards their action when infectious disease was reported to them.

This subject has been discussed at a meeting of the Hereford rural sanitary authority, where complaint was made that Dr. SANDFORD, on receiving information from someone, who stated that "he thought" there was scarlet fever at a certain house, did not go himself because he had an engagement with another sanitary authority, but sent one of his inspectors to make inquiry, and, if necessary, to use disinfectants. The chairman of the Hereford authority, Sir HERBERT CROFT, who was particularly anxious to remind Dr. SANDFORD that he was a "servant," is reported as having declared that "it was the duty of the medical officer of health to inquire into every case," and that in this matter he had taken the opinion of Sir RICHARD HARRINGTON, chairman of the Bromyard sanitary authority, who entirely concurred with him. Dr. SANDFORD explained that he had, in the performance of his duties, been guided by the "digest" which we published, and to which he referred; but he gained no hearing, and was finally told by the chairman that unless he obeyed the order—that is to say, the chairman's interpretation of it—he would be reported to the Local Government Board.

Into the special circumstances of the case adverted to we do not propose to enter, because they are not reported with sufficient detail to give us all the facts, and because it was admitted that the medical officer of health is not bound, under ordinary circumstances, to see the patients themselves or even to enter their houses. The question in dispute is the interpretation which should be placed on the first paragraph of the instruction contained in the order. In the first place it must be noted that the instruction relates to an "outbreak," and that this term is in no way defined. From this we gather that it was the intention of the central authority to leave it to the medical officer of health to judge as to what constitutes an outbreak. A single case of cholera, or of small-pox amongst an imperfectly vaccinated community, must be regarded as an outbreak of a dangerous character; but that one case, or even two cases, of scarlet fever or of measles in a district, every portion of which is known to the medical officer of health, should invariably, and as a matter of course, be placed on a similar footing and call for inspection without delay was, in our opinion, never intended. A single case of such a disease may at times need instant inquiry, as, for example, if it occurs in a school or some similar establishment where it is certain to spread, and where it can be immediately isolated. But when it occurs in a locality the sanitary condition of which is known to the responsible officer, and when the patient is attended by a medical practitioner who is known always to take every possible measure of precaution against spread, then it must be entirely left to the medical officer of health to judge how far he need go himself, or how far he can perform the few functions which are then possible to him, through an intelligent inspector of nuisances. In districts where the sanitary authorities have been really alive to the necessity of dealing efficiently with infectious disease, and have provided themselves with a sanitary hospital, then the medical officer of health would doubtless feel an additional obligation upon him to pay an immediate visit for the purpose of securing the earliest possible isolation; but where this has been neglected, the work of a medical officer of health, in the face of one or two cases of scarlet fever in a rural district, must be so limited in character that he alone can be the judge as to what action it is necessary to take when the intimation of the existence of the disease reaches him. In the absence of an authoritative decision on the point we cannot admit the interpretation locally placed on the instruction in question, neither can we believe that anyone holding the appointment of medical officer of health is debarred from using his discretion as to the need for an immediate and personal visit when isolated cases of the various infectious diseases are reported to him.

As can be well remembered, the year 1874 was characterised by severe outbreaks of enteric fever at many important towns throughout the country. Though Oxford and Cambridge were not so severely visited as many other places, still the deaths that occurred among the undergraduates at some of the Colleges caused an extreme feeling of anxiety, and led to a searching investigation into the sanitary condition of the two Universities. At Oxford the condition of affairs at the time to which we refer was indeed deplorable: the whole drainage arrangements of the town were in a state of transition, and as the sewers had not been then extended to the intended outfall the discharge of sewage was often prevented for days during floodtime, consequently the sewer gases were driven back into the town drains, and as these were insufficiently ventilated, the pressure became exceedingly dangerous, especially in private houses, where the drainage was too often defective. But the chief danger to Oxford lay in its impure water-supply. This was obtained from an old gravel-pit, originally dug out by the Great Western Railway Company for ballast for their line. Around the edges of this pit a new suburb, Hincksey, had sprung up. The houses having no provision for drainage, the inhabitants had dug small pits into the gravel, many of which were not even cased with brick or cement to receive the excrement, which rapidly penetrated the porous soil and found its way to the reservoir; and thus the inhabitants of Oxford were purveyed with the diluted sewage of New Hincksey instead of with wholesome potable water. No inspection of the undergraduates' lodging-houses was attempted, and our Commissioners found that in very many of them the sanitary arrangements were in a disgracefully neglected state. Oxford, however, was fortunate in possessing an efficient and zealous medical officer of health, who as far as it was in his power endeavoured to mitigate many of the most pressing evils. At the time we speak of there had been several cases of enteric fever, some fatal at two or three of the colleges, erysipelas was very prevalent, and several deaths from puerperal conditions had been recorded.

The state of affairs at Cambridge was at that time certainly more favourable than that at Oxford. Not only was the town built on a drier and a naturally more healthy soil, but the colleges were less surrounded by the town than was the case at the sister University, whilst open spaces were freely interposed, so that the town itself was broken up into several divisions—an arrangement which would naturally tend to break the force of an epidemic disease. Moreover, Cambridge had secured an excellent and constant water-supply, from springs from the neighbouring chalk downs. The blot here lay in the defective drainage.

Originally badly constructed, and only then fitted to meet the requirements of the town when much smaller, the fall owing to the flatness of the district was extremely slight, whilst the outfalls discharged directly into the Cam, so that that sluggish river was little less than an elongated cesspool. No arrangement had been made for the ventilation of this inadequate system of drainage, and the pressure in the town sewers often rose to a dangerous point. The town had no medical officer of health, and there was no inspection of the sanitary arrangements of the lodging-houses for the undergraduates. So bad were matters that the Local Government Board issued instructions to the sanitary authority to at once proceed to give effect to a drainage scheme to remove the crying evil. At the time the town was suffering from an outbreak of typhoid fever, which had fallen with special stress on one of the colleges, owing to the contamination of the college water-supply by the infected excreta sucked out of a town drain which ran by its premises.

Ten years have elapsed since then, and what have the two Universities done to remedy the evils then in existence? At Oxford the drainage scheme has been completed and works fairly well; liberal provision has been made for the ventilation of the town sewers; the old water-supply from Hincksey has been abandoned, and a pure supply obtained from the neighbouring hills, and a syndicate has been formed for the inspection of the undergraduates' lodgings by skilled agents, no house being licensed till all the necessary sanitary arrangements required by the University authorities have been carried into effect. In short, the authorities at Oxford have endeavoured to perform their duties, and have wisely recognised their responsibility in endeavouring to render their town, the chief seat of education in the kingdom, as healthy as possible. Cambridge, however, we regret to say, has during the ten years made little or no progress. Immediately after the censure passed on the sanitary authorities in 1874 there was some little stir. A drainage scheme was proposed, and there was some talk of applying to Parliament for borrowing powers to carry it into effect; but everything fell through, the only step in advance being the appointment of a medical officer of health—a step, however, that was taken only under pressure, and was made in as illiberal a manner as possible. The result has been as might be expected. The town during the last quarter has been exceptionally unhealthy, and a cry of indignation, this time local in its origin, has again been raised against the authorities. Once more has the Local Government Board sent an inspector to open an inquiry into the complaints of the townspeople, and this time we have the unique spectacle of the students themselves appealing through the inspector to the Local Government Board to enforce the long-delayed steps for the diversion of the sewage from the river. We believe that with the example before them of what has been done at Oxford, and under the expression of opinion of so many of their own townspeople, who are fully alive to their own interests, and the pressure now brought to bear for the first time by the undergraduates, the sanitary authorities will at length be roused to a sense of their responsibility, and carry into effect the scheme for drainage that has been so long under consideration. At the same time we also express a hope that the University authorities will be able to see their way to instituting a system of inspection of the undergraduates' lodging-houses as efficient as that adopted at Oxford; at present the system of inspection of the lodging-houses as carried out at Cambridge falls far short of perfection.

Annotations.

"Ne quid nimis."

THE MEMBERS OF THE COLLEGE OF SURGEONS AND ITS CHARTERS.

THE Council of the Royal College of Surgeons of England has not merely accepted Mr. Erichsen's suggestion to submit the proposed alterations in the Charters to the Fellows and Members of the College; it has even added an element of grace thereto. At the meeting held on the 7th inst. the Council resolved to report to the Fellows and Members the alterations it proposes to make in the Charters of the College, and to invite suggestions or recommendations from the Fellows and Members on these and any other alterations that may be thought desirable. The general meeting has not yet been fixed, but it will probably take place on or about March 27th. We congratulate both the Council and the members of the Corporation on the establishment of a basis of mutual deference, respect, and trust.

ETIOLOGY AND PATHOLOGY OF CHOLERA.

WE understand that Professor Koch is still at work in Calcutta on the etiology and pathology of Asiatic cholera. The authorities at the Medical College are very anxious to supply him with materials to enable him to carry out his investigations. Professor Koch is decidedly of opinion that Asiatic cholera is a disease that is caused by a specific micro-organism, and in this respect he is completely in accord with Mr. Macnamara, but, like this gentleman, he has failed to induce cholera in any of the lower animals. Dr. Koch, however, believes that he has isolated the specific micro-organism of cholera; and further, that he has succeeded in holding this parasite in pure cultivation, and in instituting experiments with these cultivated organisms. In the present state of science it is almost impossible for Professor Koch completely to elucidate the etiology of Asiatic cholera, because we do not know as yet the exact part which these specific organisms take in causing different forms of disease. Nevertheless, if he has succeeded in isolating and in cultivating a micro-organism peculiar to cholera, he will have conferred a vast boon on society, confirming in a manner which can hardly be contradicted the views so strenuously insisted on as to the communicability of this disease by Parkes, Simon, Aitken, and N. Radcliffe in this country; and by C. Macnamara, J. Murray, De Renzy, Furnell, and many other observers in India. Professor Koch considers, although he is unable to propagate the disease to the lower animals, that he has discovered other lines upon which evidence may be traced that cholera is contracted through specific micro-organisms. The profession will therefore anxiously look forward to his official report on the subject. It is remarkable that at the very time this news reaches us regarding Professor Koch's researches we have received information that Dr. Cuningham, the Sanitary Commissioner with the Government of India, has forbidden the heads of his departments to state, or even hint, in their reports that cholera is carried about from place to place by human beings. Dr. Cuningham, in spite of the evidence he might gain from the history of Asiatic cholera, persists in following the steps of his predecessor in office, Sir J. Strachey, affirming that cholera is not a communicable disease.

Dr. Cuningham's idea on the question might not be a matter of much public concern were it not that he holds the position of official referee to the Government on the subject. Both the Government of India, however, and their sanitary advisers incur a grave responsibility in acting contrary to the opinion of such men as those to whom we have referred. The position of the Government might have been different had unquestionable success attended the efforts of the Sanitary Department in India. But Dr. De Renzy, in a pamphlet we reviewed a few weeks ago, states that since the publication of the report of the Royal Commission of 1862, there has been no appreciable reduction in the average rate of mortality among the British troops in Northern India. This statement up to the present remains unanswered, and much of this mortality is due to cholera.

THE ANALYSIS OF STALE MILK.

A DIFFICULTY, probably unforeseen at the passing of the Sale of Food and Drugs Act, 1875, has for a long time past led to disagreements between the public analysts appointed by local sanitary authorities and the Government analysts of Somerset House, who were, by no seeking of their own it must be remembered, endowed with some of the powers of a court of appeal. That some such court of appeal was necessary in the interests of tradesmen and manufacturers few impartial persons doubt; for not only is it possible for any analyst, however experienced, to make a mistake, but there is the additional risk that the analyst appointed by a local authority may not be always a thoroughly skilful person. That most of the public analysts are good and careful chemists, and that they have contributed very largely to the scientific knowledge of adulteration, all must agree; but still the errors of the few have led to occasional distrust, not only among tradesmen but also among the general public. The difficulty to which we have referred is this. Milk is subject to progressive alterations in composition when kept, so that the analysis of fresh milk does not agree exactly with that of the sample after keeping. The reason of this will be obvious to all our readers. It is due chiefly to the alteration of the "solids not fat," upon which the evidence of adulteration with water to a great extent depends. Now, the public analyst for the most part performs his analysis upon the fresh milk, and is indeed compelled to state in his certificate the condition of the sample when he received it. But the sample reserved for Somerset House must needs be stale in many cases, if not in all, before it is analysed. Dr. Bell and his colleagues have taken a great deal of trouble to ascertain the rate at which milk alters in composition, and have arrived at a correction which in their opinion enables them to decide from the analysis of the stale milk what was the composition of the new. We do not propose to discuss the accuracy of this correction. It is vehemently impugned by some of the most distinguished public analysts; and in a recent trial Dr. Bernays even convinced the judge that his analysis of the fresh milk should take precedence over that made subsequently at Somerset House. Of course it is obvious that the Government chemists were bound, if possible, to devise a method for the analysis of stale milk, and were also bound, if doubt existed, to give the benefit of that doubt to the accused persons. But it is equally obvious that an analysis, properly performed, of fresh milk is more trustworthy than a result deduced by a general formula from the analysis of a stale example. The real difficulty in regard to milk analysis does not lie in the methods of analysis, which are, if not perfect, at any rate sufficiently accurate; nor in the apparently unavoidable conflict between the inferences derived from the analyses of fresh and stale samples. It lies in the terms of the Act of Parliament. The Act imposes a condition upon analysts which in the case of milk is impossible. It requires them to state in their certificates the extent of the adulteration. This is easy enough with regard to most adulterations, but for milk there is and can be no fixed standard of composition. Pure milk should contain, and does generally contain, not less than 9 per cent. of solids not fat and 3 per cent. of fat. But instances are on record of genuine milk containing less than the above quantities, and it is impossible to say how poor an individual sample of genuine milk may be. Thence comes the real difficulty. The Act does not say that milk below a certain standard of strength shall not be sold, but only that milk shall not be mixed with water. A dealer might, under the Act, be fined for adding 5 per cent. of water to a rich milk, although he left it much above the current standard of strength; but not for selling the genuine milk of a half-starved and over-milked, though not diseased, cow. This is an obviously absurd system. The condition should be that milk below a certain standard of quality, both as regards butter-fat and solids not fat, should be deemed adulterated. Those who adulterated down to this strength would of course escape scot free; but so they do now, and so they must under any system that has been suggested. Milk that is capable of standing such a Parliamentary test would at any rate be fit for human food and sufficient for human requirements, and better milk could always be obtained, as at present, at an extra price. Now, however, the analyst is compelled to some extent to override the law. When he certifies that a certain sample of milk has had "not less" than a specified small quantity of water added to it, he cannot be sure but that nature, and not the milkman, has done the work of adulteration. Now, the Sale of Food and Drugs Act contains no provision for fining nature. And when, compelled by the force of circumstances, he certifies that a sample of milk containing 8·5 per cent. of solids not fat is "genuine milk," he certifies to what he knows is in all probability untrue.

CENSURES BY CORONERS' JURIES.

IT is to be regretted that coroners' juries, under a mistaken sense of duty and a groundless belief in their powers, show themselves increasingly prone to censure the medical officers of workhouses and Poor-law districts. They have hardly yet commenced to criticise the conduct of hospital physicians and surgeons, but this must be expected to follow at no distant day if the insolent comments of juries and jurymen on the mode in which medical officers under the Poor-law system discharge their obligations are not discouraged and repressed. Coroners are, of course, principally to blame for these explosions of petty zeal. If they had the wit and wisdom to direct the inquiries carried out under their personal authority with something like order and intelligence, there would be less of this sort of thing to deplore; but it is necessary that medical officers and members of the profession generally should be admonished to take up a dignified and strictly tenable position, so that when they go into that most equivocal of all courts, the coroner's, they may not needlessly expose themselves to insult. In the first place, it is indispensable that medical officers should be particularly formal in the performance of their duties. With a wide and, unhappily, only too active field of observation in this matter of Poor-law work, we must confess it seems to us that as much censure and insult is drawn down on members of our profession by excess of benevolence in the administration of their offices as by lukewarmness in the discharge of their official obligations. Not a visit should be paid, or advice given, still less should medicine be sent out, except upon the strict written "order" of the relieving officer or overseer, or on actual presentation of the card entitling a pauper to permanent medical

relief. It is by an easy-going way of dealing with the poor that medical officers get themselves into trouble. No workhouse or district medical officer should attach the slightest importance to an unofficial communication, and on no account ought he to place a particle of faith in any statement or promise made to him by guardian, overseer, relieving officer, or pauper. The law requires the use of written "orders," and the law should be peremptorily obeyed. It is not necessary to be perpetually in hot water with a local board or its officials. The medical officer should begin as he means to go on, and, with perfect courtesy and good manners, simply and precisely follow the written letter of the order and regulations governing his conduct. If this were always done, we should not be so frequently called upon to defend medical officers who have placed themselves in situations of difficulty by laxity or excess of service.

CHLOROFORM ASTIGMATISM.

M. DUBOIS has made an interesting communication to the Société de Biologie on the action of chloroform on the nutritive media of the eyeball and on the mammary gland. On examining the fundus of dogs narcotised with chloroform, he found its characters unusually difficult, and at times impossible, to distinguish. He observed also shadows upon it which seemed to be produced by a particular alteration of the cornea. Irregular astigmatism was present, and was pronounced. By washing the ocular surface, he proved that these appearances did not depend on mucous flakes in front of the cornea. Similar and very marked astigmatism was observed in a man while under chloroform. This abnormality was found to disappear when sensibility returned. Diminution of refraction was particularly noted in one of the dogs. The tension of the globe was in these various cases also lowered. A comparative observation on the mammæ of a bitch appears to throw some light on the ocular phenomena. The breasts, which were turgid with milk at the commencement of anæsthesia, became flaccid and comparatively empty when the animal was fairly comatose. It may be suggested in accordance with these experiments that the peculiarities of refraction above detailed, like the alteration in the breast, are due to relief of tension in the fluid constituents of the organ affected, a condition which may easily occur during chloroform administration if the heart's action continue vigorous, seeing that every vascular channel then undergoes relaxation of its muscular fibre and consequent dilatation, and the escape of its contents is proportionally facilitated.

METROPOLITAN OMNIBUSES.

OTHERS besides ourselves must have observed a change for the better in the construction of the new metropolitan omnibuses. There is evident a greater consideration for hygiene as well as for style than hitherto. There is freer ventilation, without more draught. Besides the roof openings and the inevitable open door, a perforated metal belt running round the vehicle above the windows provides for a steady and equable filtration of air. There is more glass and less woodwork, consequently more sunlight in the interior in fine weather, and more of the purifying influence which that is believed to exercise. The lamp in some cases, as it should be in all, is hung outside, not within, the omnibus; and there is, if we mistake not, greater breadth of beam. All these are matters which conduce to health as much as amenity. We may, perhaps, indulge a hope that some thought will soon be expended on the condition of the still unregenerate "four-wheeler." London furnishes one of the swiftest and most comfortable and scientific of cabs in the hansom. It is time that its companion on the cab-stand should be made to acquire some of those necessary graces which it now so signally lacks.

THE MYSTERIOUS DEATH BY ARSENICAL POISONING.

THE jury have at length, after a full investigation touching the death of a prisoner from arsenical poisoning in the Wandsworth Prison, given an open verdict. From a medico-legal point of view the question "Suicide or Homicide?" may well be considered. With regard to the latter no evidence whatever has been adduced, and therefore the former may be regarded as probable. It would not be impossible to conceal from the cursory examination of a prison official a small lump of arsenic of say two or three grains in weight, and tea would be a convenient vehicle to dissolve it; and as a small shutter with a tiny hole bored in it affords the only means of communication between a prisoner and his friends, no one could see what was being done to food passed in. The disposition of the deceased was a happy one; he was never morose, and from what could be ascertained he had never exhibited any suicidal tendencies. He was not seemingly tired of life, he was willing to mend his ways, and his wife was forgiving. He had been in the same prison before, and three months is not a hard sentence. Still, he declared in effect that he would "Never go through it alive," a phrase with a very patent *double entente*. He was perfectly cheerful while under remand, and up to the time of receiving sentence, but after that was passed became dejected; doubtless, since his hope that the case would be dismissed was dashed to the ground. His wife was most anxious to free him. But, taking everything into consideration, why should he carry a pellet of solid arsenic about him? We must confess that the whole case is very mysterious, and as the deceased made no statement himself, we cannot but coincide with the view taken by the jury.

THE DEATH OF MR. CHENERY.

WE of the weekly press can only in a distant sort of way surmise what must be the mental strain endured by the editor of a daily journal, and especially of a man occupying such a position as that wherein Mr. Chenery succeeded Mr. Delane. For the staff of a daily newspaper night is turned into day, and without the proper complementary process of turning day into night; but for the editor in chief of a leading journal there is hardly any respite from labour and anxiety, at least none on which he can count. The work of an editor of a periodical appearing once a week is mere child's-play as compared with the toil of a man who is responsible for all that appears in the pages of a daily paper, for the determination of its policy and for the general conduct of its literary affairs. How can any brain stand such wear and tear, or any organism retain its health and integrity of function, with so much work and worry, and so little rest? Mr. Chenery had one great mental and physical advantage—his brain had been especially well developed in youth by steady and severe labour. In spite of this, however, he succumbed, though not until absolutely exhausted by the severity of his exertions. He leaves behind him a place not easily filled, and will be long regretted by all who had the happiness of his acquaintance.

"TEMPERANCE PRINCIPLES."

WE are very sorry to hear that the new Surrey County Asylum at Cane-hill is to be "worked on temperance principles." Medicine has nothing to do with *principles* outside its own domain. It may be desirable in many cases to avoid stimulants, but their avoidance ought not—in fact *cannot* in any scientific sense—be a matter of principle. If asylums are to be "worked on temperance principles," other institutions of the class will before long, probably, "be worked" on "vegetarian principles," and, perhaps, in

the future, when that fashion which so much governs the progress of events has taken another turn, there will be asylums "worked on alcoholic and carnivorous principles." As men of science, the members of our profession should cut themselves and their work adrift from these vagaries. Every medical man is bound to act as he thinks best in the management of the cases under his care, and those who think it wise and safe to deny the insane the use of alcoholic stimulants of all kinds are free to do so; but let us hear nothing of asylums "worked on temperance principles." It is a discredit to our cloth that such a phrase should be employed with regard to work done in the name of science and the responsible practice of the art of healing.

THE NURSING AT CHARING-CROSS HOSPITAL.

A MEMORANDUM to the Council of the Hospital from the Council of St. John's House, a hasty and ill-advised pamphlet recently published by Mr. Few, the treasurer to the hospital, and a letter in *The Times* of the 13th inst. from the vicar of St. Martin's-in-the-fields, will have drawn public attention to the question whether, under the direction and guidance of the treasurer, the governors of the hospital should break their nursing connexion with St. John's House at Midsummer next. It is clearly understood that if the agreement with St. John's House be determined, the nursing of the hospital will be handed over to the sisters who left King's College and Charing-cross Hospitals in July last, and who are now known under the name of the Sisterhood of St. John the Divine. It is obvious from the opinions of the medical staff and the majority of the Council of the hospital that the nursing is now performed as efficiently as it was under the former sisters, and that the "lowering in its tone" so confidently predicted has not taken place. It is therefore very satisfactory to learn that the majority of the governors have elected to support the Council and the medical staff rather than follow the advice of the treasurer. To reintroduce the sisters and nurses who left the hospital and severed their connexion with St. John's House, in order to show their sympathy with the late sister-matron of King's College Hospital, would in our opinion have been a most unwise and imprudent step. We have, on a former occasion, clearly stated that we think a hospital committee is bound to supervise and control its own nursing staff, but if it is judged advisable to transfer this duty to an outside body, it can only be to one impressed with a proper regard for its obligations and duties both to the patients and the hospital authorities. A sisterhood which pays no attention to the Council whom the members have themselves elected, cannot expect to be entrusted with the management and control of one of the most important sections of a large hospital.

VOLUNTEER MEDICAL ASSOCIATION.

A DEPUTATION, consisting of representatives of Volunteer surgeons, the civil medical profession, teachers in the London medical schools, and the various ambulance aid associations throughout the country, waited on the Secretary of State for War, at the War Office, on the 13th inst., to urge upon the Government the desirability of assistance being afforded in the embodiment of a medical corps, which, when formed, would stand in the same relations to the Volunteer forces as the Medical Department and the Army Hospital Corps do to the Regular Army. In reply, Lord Hartington said that the proposal seemed to him to have in it the possibility of a great deal of advantage both to the Volunteer forces and to the military resources of the country generally; and that it would give him very great satisfaction if the details of the plan could be satisfactorily and fully worked out, and in that case he thought they might count upon every assistance from the War Department and the military authorities.

DEPUTY INSPECTOR-GENERAL O'LEARY, M.D.

WE observe that Dr. O'Leary, who was principal medical officer of the cavalry division in Egypt, has written to *The Times* and the *Globe* complaining of the manner in which these journals noticed the charges brought against him by Sir Drury Lowe in his evidence before Lord Morley's committee, while they entirely ignored Dr. O'Leary's contradiction of them in his examination before the same body. We think it is to be regretted that Dr. O'Leary has allowed so long a time to elapse before calling upon these papers to contradict Sir Drury Lowe's statements. When he first heard of them in February last he applied to be examined before the committee, and produced evidence to prove that the charges were, at least so far as he was concerned, wholly without foundation. This view appears to have been taken by the committee, for in their report they do not make the slightest allusion to them, although they were of so serious a character that it would have been impossible to pass them over if they had been based on anything more reliable than camp gossip. One of the charges, that "he invalided himself," must appear so absurd to anyone acquainted with the service that it is difficult to understand how an officer of Sir Drury Lowe's experience could have made it. Another of them, that he refused to see some thirty cases at the field hospital, and told them "this is not the time to come to the hospital; my hours for giving out medicine are so-and-so; come to-morrow and get it," is equally absurd, as Dr. O'Leary had no more to do with prescribing for the patients and "giving out medicine" than Sir Drury Lowe himself—his duties being purely administrative. The statements of Sir Drury Lowe seem, like too many of those which were made against the medical department, to have been founded on mere hearsay, and one cannot but think that it is a blot upon his fair fame that he did not withdraw them after Dr. O'Leary's evidence was published. It may be fairly asked, too, why Sir Drury did not take any steps at the time to ascertain how far the charges were well founded, for they were of so serious a character that they undoubtedly should have been brought to the notice of the general commanding and of the Surgeon-General if they had been capable of being sustained. Instead, however, of adopting this obvious course, he says: "I made a note in my own mind that he should hear of it again." In this particular there appears to have been a neglect of duty on the part of the general commanding the cavalry division.

FOOTBALL ACCIDENTS.

A PRACTICAL illustration of the risks attendant upon football has been shown by the action of the Northern Accident Insurance Company in refusing to renew the present policies covering risks in connexion with football and bicycling. The risks are so great that the ordinary premium would not cover it. The experience of a large insurance company proves the truth of our often repeated assertion that accidents arising from football, as at present played, are more numerous than those occasioned by the pursuit of any other athletic exercise. Perhaps this determination may have the effect of inducing the leading players to modify to some extent the rules under which the game is played, with a view to diminish the risks as much as possible. One of the most painful features of football is the fact that so many of the injuries received in playing the game, when not immediately fatal, often incapacitate the player for life and render him a burden on his relatives. We confess we can see nothing manly in incurring this risk, especially when the player has no resources to fall back upon except the family purse. A sad instance of this came under our notice only recently. A young man who held a good appointment in the City fell somewhat violently on his back

whilst playing at football; little immediate mischief apparently resulted, but a few weeks afterwards symptoms of muscular paralysis developed, which progressed to such an extent that he had to throw up his appointment and become a burden on his mother, whose resources are very limited. Such cases are not uncommon, and when they occur entail more distress than similar injuries received in the hunting field, because the majority of those who can afford to hunt are men of independent means, and have resources of their own to fall back upon should they be disabled, whereas a large number of football players are young men who have yet to make their way in the world.

THE CONTAGIOUS DISEASES ACTS.

IN the course of last week questions were asked by Sir H. D. Wolff as to the effects of the suspension of the operation of these Acts on the health of the Army and Navy, and a meeting was held at Exeter Hall to protest against "State regulation of vice being continued in England and our colonies." The above show clearly enough that the legislation of last year is not accepted as a final solution on either side, and we hope that the returns which have been prepared by the War Office will shortly be published, so that authoritative statements may be made, and credence no longer given to mere rumours and opinions. At the meeting of those in favour of unconditional repeal, Mr. Stansfeld complacently observed that "he had demonstrated in the House of Commons the hygienic fraud and imposture of these Acts, and would do so again." Surely he must have forgotten the reply of the Judge Advocate-General, "whose mind was like a piece of white paper when he joined the committee," and who, as a result of the evidence adduced in the course of the inquiry, came to the conclusion that these Acts had done much to alleviate the severity and check the growth of one of the most terrible diseases by which humanity is scourged. It is evidently their success, which has so largely influenced the opposition to the Acts. We need not follow Dr. Cameron's estimate as to their economic value, for the question of the prevention of acquired and inherited syphilis, and the health of our soldiers and sailors and their offspring, has not yet been considered from the mere stand-point of pounds, shillings, and pence. We fail to see in the compulsory detention of prostitutes "the negation of all true morality, and the absolute negation of true religion," but are obliged to consider it as a mere question of sanitary police. The hygienic value of compulsory legislation is not appreciated at Halifax or Leicester, but it is at Devonport and Portsmouth, where its reclaiming influences have also been shown most conclusively.

CETEWAYO.

IT was not an act of grace on the part of the House of Commons to receive the news of the death of Cetewayo with "laughter." The dusky monarch has been throughout, to our thinking, more sinned against than sinning. He showed himself an able though barbarous chieftain in his own country, and he proved a powerful foe to the English when we invaded his territory. The cause of his death is believed to have been "fatty degeneration" of the heart. The medical evidence is not conclusive, but it is a fair presumption that death may have been caused as suggested. This conclusion must not, however, be hastily drawn from the fact that Cetewayo was a prodigious feeder. The popular error that "fatty degeneration" of the heart is the same thing as an accumulation of fat around that organ is one which ought to be corrected, as every practitioner of course knows how to correct it. When muscular tissue degenerates, as it may do from any one of many morbid causes, fat is deposited interstitially in the place of the atrophied organic structure. As a matter of physiological or pathological fact, "fatty degeneration" is quite as likely to occur in a thin subject as in one that is obese, and voracious feeding has nothing to do with "fatty degeneration," though in a certain proportion of instances it may have something to do with the accumulation of deposits of fat around organs and in the interspaces of muscle fasciculi. We ought to keep the discrimination of matters which are likely to be confounded always clear. Many conditions besides large eating determine the presence of fat, and "fatty degeneration" is, as we have said, something altogether apart from, and in no way to be confounded with, fatness.

THE BRIGHTON CORPORATION AND NOTIFICATION OF INFECTIOUS DISEASES.

A CORRESPONDENT writes: "Within a recent period the compulsory notification of infectious diseases by medical practitioners has caused prolonged and often acrimonious discussion; but notwithstanding much opposition at the various meetings of, we believe, the majority of the profession, clauses requiring the above information have been embodied in the local Acts of several towns, and are now in operation at such places. The same difficulties and discords are now being experienced by our professional brethren in a southern town. There is a so-called 'Brighton Improvement Bill' just framed; it has been passed by a large majority of the Town Council, and is now about to be submitted to the ordeal of the House of Lords. In it there are proposed clauses relating to infectious diseases. Due notice is to be given by the occupier of a house, or by some other responsible person; and by every medical practitioner attending on, or called in to see, an inmate suffering from an infectious disorder. For such certificate or declaration a legally qualified medical practitioner is to receive 2*s.* 6*d.*, and 1*s.* in respect of a case occurring in his practice as medical officer to a public institution. The members of the Brighton and Sussex Medical Chirurgical Society, representing the greater part of the profession in the town, have held meetings on the above clauses which affect them, but they are not, we hear, in accord with the Town Council as respects 'the compulsory notice.'"

INTERNATIONAL OTOLOGICAL CONGRESS.

THE organisation committee of the third international Otological Congress have just issued their invitations to those who are interested in otology to meet in Basle during the first week in September of the present year. The gentlemen who have consented to act on the organisation committee are, Prof. Burckhardt-Merian of Basle, who is the President, C. T. Blake of Boston, W. B. Dalby of London, A. Hartmann of Berlin, B. Löwenberg and E. Menière of Paris, A. Politzer of Berlin, Urban Pritchard of London, St. J. Roosa of New York, and G. Sapolini of Mailand. Gentlemen wishing to read papers at the meeting are requested to communicate the subjects which they intend to treat to Alb. Burckhardt-Merian by May 15th next.

EPIDEMIC OF SMALL-POX IN BIRMINGHAM.

ACCORDING to Dr. Hill's report for the last quarter of 1883, the number of small-pox deaths registered for that period was 40. As many as 435 cases had come under his notice, and 403 have been admitted into the Borough Small-pox Hospital. Since the beginning of the present year the epidemic has extended, 21 deaths having been registered in the four weeks ending January 26th, and 16 in the two succeeding weeks. Scarlet fever is also somewhat prevalent, and both the small-pox hospital and the separate fever hospital are in continuous use for the isolation of the sick.

MEDICAL HONOURS.

WE are pleased to note that the French Government has created Dr. Vidal a Knight of the Legion of Honour. For many years Dr. Vidal has been well known and much respected by the English inhabitants and visitors at Hyères. He added greatly to his popularity by defending the English colony against an effort made many years ago to drive away the English local practitioner on the ground that he was a foreigner. Dr. Vidal, against his own personal interests, maintained that English subjects had the right to call in English doctors, and urged it was to the advantage of Hyères, as a winter station, that an experienced English physician should be present to attend foreign visitors. Since then English and French doctors have lived in perfect harmony at Hyères, a fact which has not failed to contribute to the prosperity of the station. To Dr. Vidal we are indebted for many valuable meteorological observations as to the climate of this the nearest and yet the most southern point of the French Riviera. He has also prepared a scheme and selected a site for the treatment of strumous children in the neighbourhood. Altogether, Dr. Vidal has well won the high honour which has now rewarded his labours.

DEATH OF EX-PROFESSOR BALFOUR.

THE death of Dr. Balfour was intimated in very feeling terms by Prof. Maclagan, at the Edinburgh Graduates' Club, on Wednesday night. There have been men of more genius than the late professor in the Professoriate of Edinburgh, but there have been few professors more devoted to their work, and who have more impressed their activity and individuality on the university and its students, than John Hutton Balfour, as there have been few botanists whose work has been more honoured and recognised by the learned Societies of Europe. Dr. Balfour had been for some time in failing health. The continuation of faculty and fame in families is happily illustrated by the appointment of Dr. Balfour's son, Isaac Bayley Balfour, to the Botanical Chair in Oxford, or rather by his translation to this chair from the Regius Professorship of Botany in Glasgow. It is no small credit to the University of Edinburgh that in return for two or three professors from Oxford she can send two such professors to Oxford as her graduates, Dr. Burdon Sanderson and Dr. Bayley Balfour.

SPONTANEOUS COW-POX.

A CASE of alleged spontaneous cow-pox is published in the *Revue Sanitaire* for Jan. 10th. The case was reported to Dr. Plumeau of Bordeaux, on information derived from M. Barbe, veterinary surgeon, and M. Pichausel, a physician at Podensac; and the cow in question was stated to be at Cérous. On Dec. 26th last, the animal, a milch cow, was examined by Prof. Layet, and by M. Baillet, veterinary surgeon of Bordeaux. On the udder and teats a considerable number of pustules, mostly dried and covered with a black scab, were discovered; but six or seven tubes of fluid were procured and preserved with all the necessary precautions. On the same day, after their return to Bordeaux, the experts in question inoculated a heifer with the fluid, and on the 31st three typical vesicles had been produced. A second heifer was then inoculated with fluid taken from these vesicles, and although the result was a little delayed, the operation was successful at each of thirteen insertions. On both occasions the results of the inoculation are stated to have been characteristic of well-marked cow-pox. Although nothing is said as to the possibility that the milch cow first affected might have been handled by someone through whom the infection of small-pox could have been conveyed, yet we assume this point and all other possible sources of small-pox infection were considered and excluded, for it is asserted that the investigations made by the Municipal Vaccination Service in Bordeaux have proved that vaccinia is not small-pox.

THE LONDON FEVER HOSPITAL.

THE annual general meeting of the governors was held on Friday, Feb. 8th, at the Freemasons' Tavern. From the report of the Executive Committee it appears that the year's ordinary expenditure was about equal to the ordinary income, but the extraordinary expenditure was heavy, owing to necessary repairs and the erection of new isolation wards, to which we called attention in our issue of Dec. 15th, 1883. The working of the latter has thus far been highly successful. The new block, designed by Mr. Keith D. Young, is the beginning of a pavilion system of small wards, which the authorities, with the aid of the public, hope to carry out. The advantage of such system is obvious, since it enables cases of uncertain febrile disease to be admitted much earlier than is customary, and without fear of a dangerous fever being communicated from patient to patient. During the past year the assistant resident medical officer contracted enteric fever, and eight nurses some form of febrile disorder, but happily all recovered; 1028 cases in all were under treatment. Dr. Buchanan, who presided at the meeting, concluded his remarks by saying that "every patient coming to the London Fever Hospital could be promised a better chance of recovery than by remaining under treatment at home." The facilities for removal and the freedom of patients in large airy wards during convalescence contribute largely to this end. Funds are urgently needed.

FIRST CONVICTION UNDER THE DENTISTS ACT OF 1878.

IN an annotation last week a case was recorded in which the British Dental Association obtained a conviction against a chemist, who was also a registered dentist, for using the letters L.D.S. after his name, and he was fined £2 and costs. The defence was that being L.D.S. of Ontario he was entitled to call himself L.D.S., but the magistrate held that he ought not to have omitted Ont. or Ontario. This raises a question of great importance to the profession generally, especially to those medical practitioners who use the letters M.D. and other designations after their names obtained in foreign universities which are not registrable as qualifications. The law as laid down by the magistrate is that no letters signifying diplomas or degrees can be used in England unless they are registrable, except with the addition of an intelligible abbreviation of the university or college. This definition is to some extent satisfactory, but it would have been much more so had the magistrate been able to interpret the law as prohibiting entirely the use of titles unless registrable.

ORMOND v. SPENCER.

A SINGULAR case of ejectment of much local interest in Birmingham was tried on the 28th and 29th ult. at the Staffordshire Assizes before Baron Huddlestone. In the course of the evidence the test of the virginity of two of the daughters of the plaintiff was prominently brought under discussion. It is much to be regretted that the details of the technical evidence found their way into the daily press, and that details of a nature suggestive of prurient curiosity and immorality were put in bold light before the general public. Surely, some means might be adopted less offensive to public taste and morals in cases where it is considered necessary to adduce testimony of a character so subversive of all that should tend to the preservation of purity of tone and feeling in the young.

THE LATE DR. HILTON FAGGE.

IN response to a wish expressed by many of the friends of the late Dr. Hilton Fagge that some means should be taken to perpetuate his memory, a meeting was held on Jan. 21st, at which a committee was appointed in furtherance of this object. On Jan. 28th this committee met, and it was decided that subscriptions be asked for the purpose of placing in an appropriate position in Guy's Hospital a memorial of the late Dr. Hilton Fagge, any surplus of the amount raised to be devoted to aid in the education of his children. The treasurer of the fund is Dr. Wilks, 72, Grosvenor-street, W., and we feel sure that those who have known and appreciated Dr. Hilton Fagge's high personal character, his valuable scientific work, and his eminent professional services, will gladly seize this opportunity of testifying their regard for his memory.

THE EDINBURGH GRADUATES' CLUB.

IN the somewhat long and gratifying history of this Club there has never been a more pleasant dinner than that which took place on Wednesday evening; this will be understood by all Edinburgh men when they hear that the chair was occupied by Professor Douglas Maclagan. Though now the oldest member of the Medical Faculty in the University, it was a pleasure to the large gathering of Wednesday to find that his voice has lost nothing of its sweetness, as he himself has certainly lost nothing of his geniality. He delighted the Club by singing two songs, one of his own composing. There were many visitors, for the toast to whom Canon Duckworth returned thanks.

THE ALLEGED POISONINGS BY ARSENIC IN LIVERPOOL.

THE trial of the two women, Catherine Flannagan and Margaret Higgins, sisters, commenced at the Crown Court, Liverpool, on Thursday, before Mr. Justice Brett. The case has attracted much local and general interest, and the court was crowded. Mr. Aspinall, Q.C., Recorder of Liverpool, with Mr. McConnell, conducted the prosecution; Mr. Shee and Mr. Pickford, at the request of the judge, defended the prisoners. The trial is expected to last at least two days, and possibly three. We hope to give a summary of the proceedings next week.

THE PIGEON SHOOTING BILL.

MR. GEORGE ANDERSON has done well to reintroduce his Bill to make the pastime of pigeon shooting illegal. We do not envy the task, and we cannot understand the state of mind, of those gentlemen who are to oppose the measure. Everybody knows that pigeon shooting is not "sport"; it is simply a cruel excuse for gambling, and as such it ought to be put down.

FRESH PAINT.

THE current belief among householders that the smell of fresh lead paint is noxious is founded on pretty general experience, but is opposed by the belief, equally current among chemists, that lead compounds are not volatile. A fact recently brought to our notice seems to support the domestic theory. The basis of the useful and popular luminous paint is known to be sulphide of calcium. Now, this compound, when unprotected by varnish, glass, or some other impervious substance, is slowly acted on by the acids of the air and sulphuretted hydrogen is evolved, which blackens lead paint. This is well known, and can easily be avoided by proper protection of the paint. But the curious thing is that unprotected luminous paint is found to be perceptibly blackened by the fumes from fresh lead paint. There seems to be only one possible explanation of this—namely, that a surface freshly covered with lead paint does actually emit some volatile compound of lead. We believe that many physicians could confirm this view from their own observations in regard to newly painted houses.

TREATMENT OF TYPHOID FEVER.

AT the next meeting of the Medical Society of London, to be held on Monday Feb. 18th, Dr. Sidney Coupland will read a paper on the Treatment of Typhoid Fever by the Application of Cold. Drs. Bristowe, Cayley, and Frederick Taylor will join in the discussion in the order mentioned.

SIR WILLIAM GUYER HUNTER.

WE understand that Surgeon-General Hunter has been offered and has accepted the honour of knighthood of the Order of St. Michael and St. George. This announcement was made by Sir Joseph Fayrer at the meeting of the Epidemiological Society held on Wednesday last.

THE GENERAL MEDICAL COUNCIL.

WE are informed that the General Medical Council is summoned to meet at two o'clock on Tuesday, March 25th.

IN the massacre of Baker Pasha's troops on the 4th inst., a well-known Red Cross surgeon, Armand Leslie, fell. During the Servian war Mr. Leslie acted as the chief agent of the English Red Cross Society, and during the Russo-Turkish war he was the principal medical officer of the National Aid Societies Ambulance, receiving the Osmanie and Medjidie Orders for his services.

ON the motion for the second reading of the Vaccination Acts (Compulsory Clauses Repeal) Bill, Dr. Cameron will propose as an amendment, "That, while it is inexpedient to abolish compulsory vaccination, our vaccination laws might with advantage be amended in other points of detail."

THE Queen has been pleased to grant to Sir Richard Owen, in recognition of his eminent services to science, an addition of £100 to the Civil List Pension of £200 a year which he at present enjoys.

IN a Bill introduced by him into the House of Commons, Mr. Monckton, M.P., proposes to direct every sanitary authority to appoint inspectors to supervise the arrangements of houses in their bearing upon the health of the inmates.

IT is satisfactory to learn from Mr. Mundella that a Bill is under the consideration of the Government dealing with the whole subject of patent medicines, and that the measure will shortly be introduced in the House of Lords.

IN the Queen's Bench Division on Monday, it was once more decided that one conviction for disobedience to an order for the vaccination of a child does not set aside the liability of the parent to a penalty for non-compliance with the law.

THE French Academy of Medicine has advised the Government to the effect that the importation of American pork would probably not be followed by any danger from trichinosis.

DR. HENEAGE GIBBES has been appointed Lecturer on Morbid Histology in the Westminster Medical School.

STEPS have been taken in Philadelphia to found a new Society for the cultivation of Medical Jurisprudence.

LETTSOMIAN LECTURES
ON
MODERN OPERATIONS FOR CATARACT.

LECTURE III.

MR. BRUDENELL CARTER said: "It is a maxim of political economy that every learner must spoil a portion of raw material; and this maxim, in its application to the old method of cataract extraction by the flap, was rendered by the saying which Beer is believed to have originated, to the effect that every beginner would destroy a hatful of eyes before he cured one." This, however, must have been a gross exaggeration in any literal sense. The value of practice in flap extraction was exceedingly great before the introduction by Mr. Poland of fixation of the eyeball by forceps. The accidents to which any operator was liable were next spoken of. The occurrence of traumatic cataract after the preliminary iridectomy was possible in the hands of any ophthalmic surgeon, and the conscious knowledge of damage to the lens should be followed by immediate extraction. The value of Pagenstecher's scoop and Dr. Bell Taylor's "vectis" in the removal of the lens was pointed out. Another complication of the iridectomy might be a large amount of hæmorrhage into the anterior chamber of the eye; this was especially prone to happen in cases in which an immature cataract was combined with early stage of glaucoma, or even with the increase of tension which may be produced by an increase in the bulk of the lens. Eserine, applied regularly night and morning for four or five days, might be of service in such cases as a preliminary to the performance of the iridectomy. When a sufficiently long time has elapsed since the performance of the iridectomy, the propriety of proceeding with the extraction must be considered. We may divide the unfavourable cases into two classes: those in which there is a tendency to sloughing of the cornea, and those in which there is a tendency to plastic iritis. Whenever the time for the extraction of the lens arrives, there are, of course, certain risks inseparable from the actual conduct of the procedure. The worst accident which can befall during cataract extraction is hæmorrhage from rupture of a vessel in the choroid; hæmorrhage which necessarily produces detachment of the retina, and which at once extinguishes all hope of the restoration of sight. The only remaining accidents which need be noted are loss of vitreous humour and failure to remove the lens. An incision insufficient for the exit of a very large and hard nucleus may be a cause of failure. A more common cause of loss of vitreous is from spasm of the external ocular muscles, or from strain incidental to vomiting. A more ordinary form of loss of vitreous is when it occurs during the course of the extraction, either as a result of spasm, or from mere weakness of the hyaloid membrane. The occurrence of the loss of vitreous, however occasioned, calls upon the surgeon for prompt decision with regard to the course which should be pursued. We may take three typical conditions, the cases in which the loss occurs after the whole of the nucleus and cortex have been removed, the cases in which the loss occurs prior to the removal of either, and the cases in which the vitreous follows the nucleus, when there is still cortex remaining within the eye. In the first set of cases the bandage must be applied rapidly and firmly. In the second class the first care of the operator should be to see that anæsthesia is complete. Then the nucleus and as much of the cortex as possible should be moved by some form of traction instrument. In the last class of cases the surgeon is called upon to take into consideration three principal factors—namely, the amount of residual cortex, the amount of actual and threatened loss of vitreous, and the proneness or otherwise of the patient to plastic inflammation. The general principle is that the cortex must be removed as completely as possible, but endeavours in this direction should not be prolonged at the expense of a considerable loss of vitreous which might otherwise be retained. The value and the dangers of the different kinds of anæsthetic agents were next discussed. The mixture commonly known as "A.C.E.," and which contains one part, by measure, of absolute alcohol, two of chloroform, and three of ether, was regarded as the best anæsthetic. The complications which may arise after an operation, and the treatment which they may require, next occupied attention. The inversion of the lower eyelid might be combated by the use of contractile collodion, or the excision of a strip of muscle and skin from the eyelid. Dr. Bell Taylor proposed to treat inversion by the application of a pair of flat bull-dog forceps. Practically speaking, the only other complication which can follow extraction is the occurrence of internal inflammation, and this may be conveniently called iritis. We may say of it that it is least severe and least likely to be attended by permanent ill-consequences when it is excited by hæmorrhage into the anterior chamber or by invasion of the lid, and that it is most likely to be hurtful when it is excited by the presence of the retained cortex, especially if this should have undergone manifest proliferation and increase. In such circumstance the inflammation is apt to assume a septic character, to extend to the ciliary body and choroid, and to terminate in wasting of the eye. Some remarks on the modes of treatment of iritis concluded the lecture.

WILLS OF MEDICAL MEN.

THE will of George James Hilbers, M.D., late of 8, Cavendish-place, Brighton, who died on October 30th last, has been proved by Mrs. Louisa Susanna Hilbers, the widow and sole executrix, the value of the personal estate exceeding £17,500. The testator appoints a sum of £6000 in settlement to his wife for life, then to his unmarried daughters and the survivor of them for their lives, and on the death or marriage of the survivor, to all his children in equal shares. The residue of his property he gives to his wife.

The will of Robert Baker, M.D., formerly of 8, Selwood-terrace, West Brompton, but late of 4, Brynmaer-road, Battersea, who died on December 6th last, was proved on the 3rd ult. by Mr. William Morrant Baker, the nephew, Mr. Horatio Noble Pym, and Mr. William Henry Best, the executors, the value of the personal estate amounting to over £12,600. The testator bequeaths to his wife, Mrs. Elizabeth Matilda Baker, £1000, and a further sum of £2000 upon trust for her for life; to Mrs. Julia Baker, the widow of his late brother, Edward Morrant Baker, £1000; and legacies to a nephew, nieces, cousins, and other relatives, friends, executors, and servants. The residue of his property he leaves to his said nephew Mr. W. M. Baker.

The will of Richard Archer Warwick, M.D., late of Onondaga, Teignmouth, Devon, who died on October 17th last, has been proved by Mr. William Hackwood, the sole executor, the value of the personal estate amounting to over £7800. The testator leaves £500 to his executor, and his household furniture and effects jointly to his wife, Mrs. Mary Louisa Warwick, and her sister Elizabeth Blunt. The residue of his property is to be held upon trust to pay an annuity of £100 to Sarah Surman Tudor; one moiety of the remaining income for the maintenance of his wife and the other moiety to the said Elizabeth Blunt; and subject thereto he gives the said residue to his godson and nephew Arthur Warwick.

Letters of administration of the personal estate of Mr James Shuter, F.R.C.S., M.A., M.B., LL.B., of 58, New Broad-street, and Lawn House, Tufnell-park-road, who died on November 1st last, a bachelor, and without leaving any will, have been granted to Mr. James Legassick Shuter, the father and next of kin. The value of the personal estate exceeds £4800.

The following legacies have recently been left to hospitals and other medical institutions:—Mr. Cobbett Derby, of 12, Regency-square, Brighton, £100 to the Sussex County Hospital.—Sir William Siemens, F.R.S., D.C.L., LL.D., of 12, Queen Anne's Gate, of 3, Palace Houses, Bayswater, and of Sherwood, near Tunbridge Wells, £2000 to the German Hospital, Dalston, and £1000 to the Tunbridge Wells Infirmary.—The Rev. John Daubuz, of Killiow, Cornwall, £100 free of duty to the Royal Cornwall Infirmary, Truro.—Mr. James Edwards, of 2, Cavendish-row, Dublin, confectioner, £500 each to the Mater Misericordiæ Hospital, Eccles-street, Jervis-street Hospital, and Adelaide Hospital, Peter-street, all of Dublin; and £300 to the Hospital for the Dying, Harold's Cross, County Dublin. — Miss Harriet Helena Mercy Barber, of the Beeches, Kingston-upon-

Thames, £300 each to the Free Cancer Hospital and the Hospital for Consumption and Diseases of the Chest, both of Fulham-road, Brompton.—Mrs. R. B. Dodgson, of Beardwood, Blackburn, whose death occurred on Saturday week, £10,000 to the Blackburn and East Lancashire Infirmary, £10,000 to the Royal Albert Asylum for Idiots and Imbeciles in Lancashire, and £5000 to the Manchester Infirmary.—Mr. Charles Curtis, formerly of 80, Mile-end-road, rectifying distiller, and late of The Hall, Plaistow, Essex, £1000 to the London Hospital.—Mr. Charles Cooper, late of Box-lane House, Bovingdon, Herts, £100 to the Hemel Hempstead Infirmary.—Mr. John Worrall Walker, late of Highfield House, Hawkhurst, Kent, £1500 each to the Manchester Royal Infirmary and Dispensary and the Salford and Pendleton Royal Hospital and Dispensary, and £1000 to the Hospital for Incurables, Mauldeth Hall, near Manchester.—Mr. John Bartholomew, late of 68, Bishop's-road, Victoria-park, who died on Dec. 4th, £100 to the City of London Hospital for Diseases of the Chest, Victoria-park; and £50 each to the Queen Adelaide's Dispensary for the Sick and Poor of Bethnal-green, and the German Hospital, Dalston.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary State and the Water-supply of Burnham. Burnham is a small watering-place in the Bristol Channel, and it stands on a bed of alluvial clay overlaid with sand to a depth of from four to thirteen feet. A system of sewers has been provided; they are ill-ventilated and have no proper means of flushing. The house-drains, too, in contravention of the bye-laws, are unventilated, and the waste-pipes from baths, lavatories, and sinks are very generally in direct communication with the drains. The height of the tide here varies much in its rise and fall, the rise during spring tides being as much as forty feet, and when it rises the sewage is at times so much dammed back that if a heavy rainfall ensues at the same time it is forced out of the drain inlets in the low-lying parts of the town. The house drains are subject to blockage, and there is frequent complaint as to stinks from drains and closets. All this is extremely important as affecting the condition of the porous sand on which the town lies, and considerable stress is laid upon it by Dr. Blaxall, who appears to have inspected the place mainly with reference to complaints which have been addressed to the Local Government Board as to the water-supply. Now, this supply is entirely derived from local wells sunk through the sand-bed, and generally some distance into the clay, the height of the water being dependent on rainfall and fluctuating to and fro as it is influenced by the tide. Dr. Blaxall points out that the character of water in wells necessarily partakes of the nature of the gathering ground, and that if the subsoil be polluted the water percolating through it will necessarily be contaminated in a degree corresponding to the pollution. The wells in Burnham, he explains, are sunk in a soil exposed to pollution in a variety of ways—viz., by soakage of surface filth, by decaying organic matter from the overcrowded churchyard, by casual leakage from the sewers and drains with which they are in near relation, and which, owing to blockage, tend specially to facilitate leakage of their contents. This state of affairs is by no means unknown to the local board of health, for it appears that during recent years samples of well water have from time to time been subjected to chemical analysis, with the result that out of twenty-three samples so dealt with not one had met with unqualified approval. Many have been totally condemned, and one sample is described as only fit for "irrigation purposes." The testimony of the chemist has thus come in usefully to stir the authority into action, although it is difficult to conceive how even this further proof was needed to show that a sandy soil, so liable to pollution, could not possibly afford a proper water-supply for the people living on its surface. Many details, chemical and other, are entered into by Dr. Blaxall to prove that the pollution of this Burnham water-supply is past all remedy, and so to lead up to his principal recommendation that in one of several ways which he indicates a proper water-supply should be provided. In the case of Burnham the matter is specially important, for, as Dr. Blaxall points out, the inhabitants of the place are not alone concerned. Burnham is a favourite watering-place, and visitors who are attracted to it have a right to be assured that in their visits "they are not exposing themselves to the risk of contracting preventable disease through the atmosphere of their dwellings being poisoned by sewer air and the water they drink being dangerously contaminated, a guarantee which Burnham at the present time cannot afford them." For their own sake, and in the interests of the public, on whom the prosperity of their town in part depends, we hope the inhabitants of Burnham will set to work to put their house in order, and so again attract to it those who in the summer desire to seek health on the shores of the channel.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 6235 births and 3466 deaths were registered during the week ending the 9th inst. The annual death-rate in these towns, which had been as low as 20·3 and 20·5 per 1000 in the two preceding weeks, was last week equal to 20·6. During the first six weeks of the current quarter the death-rate in these towns did not average more than 20·9, whereas in the corresponding periods of the four years 1880–83, the rates ranged from 28·5 to 22·9. The lowest rates in these towns last week were 15·3 in Wolverhampton, 16·3 in Bolton, and 17·9 both in Bristol and Derby. The rates in the other towns ranged upwards to 24·1 in Preston and Birkenhead, 25·5 in Oldham, and 27·9 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 418 and 419 in the two previous weeks, declined to 399 last week; they included 124 from whooping-cough, 94 from scarlet fever, 53 from measles, 35 from diarrhœa, 28 from diphtheria, and 21 from small-pox. No death from any of these zymotic diseases was registered last week in Halifax; whereas they caused the highest death-rates in Newcastle-upon-Tyne and Blackburn. The greatest mortality from whooping-cough occurred last week in Newcastle-upon-Tyne, Bolton, and Huddersfield; from scarlet fever in Blackburn, Leicester, and Leeds; from measles in Birkenhead and Salford; and from "fever" in Preston and Newcastle-upon-Tyne. The 28 deaths from diphtheria in the twenty-eight towns included 19 in London and 3 in Birmingham. The 21 fatal cases of small-pox showed an increase upon recent weekly numbers, and included 9 in Birmingham, 4 in London, 3 in Liverpool, 3 in Sunderland, and 1 both in Wolverhampton and in Manchester. The number of small-pox patients in the metropolitan asylum hospitals, which had been 104 and 110 on the two preceding Saturdays, declined to 97 at the end of last week; only 7 new cases were admitted to these hospitals during the week, against 19 and 28 in the two previous weeks. The Highgate Small-pox Hospital contained 5 patients on Saturday last, 2 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 360 and 367 in the two preceding weeks, declined to 347 last week, and were as many as 284 below the corrected weekly average. The causes of 80, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Brighton, Norwich, Plymouth, Derby, and Cardiff. The proportions of uncertified deaths were largest in Halifax, Blackburn, Huddersfied, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 22·1 and 22·4 per 1000 in the two previous weeks, further rose to 24·7 in the week ending the 9th inst.; this rate exceeded by no less than 4·1 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 19·5 and 20·8 in Leith and Dundee, to 27·2 and 31·9 in Greenock and Perth. The deaths in the eight towns included 97 which were referred to the principal zymotic diseases, showing an increase of 30 upon the number returned in the previous weeks; 23 resulted from whooping-cough, 15 from scarlet

fever, 14 from "fever," 12 from measles, and 10 from diarrhœa. These 97 deaths were equal to an annual rate of 4·0 per 1000, which was 1·6 above the mean rate from the same diseases in the large English towns. The rates from these diseases in the Scotch towns ranged last week from 1·4 in Aberdeen, to 5·1 in Edinburgh and 7·2 in Greenock. The 23 deaths from whooping-cough in the eight towns showed an increase of 2 upon the number in the previous week. The 23 fatal cases of diphtheria showed a marked increase upon the numbers in the previous weeks; 7 occurred in Greenock, 6 in Glasgow, and 3 in Edinburgh. The 15 deaths from scarlet fever included 12 in Glasgow and 3 in Edinburgh; and of the 14 deaths referred to "fever," showing a considerable increase upon recent weekly numbers, 7 were returned in Glasgow and 4 in Edinburgh. Six more fatal cases of measles occurred in Edinburgh, making 170 recorded since April last. The deaths attributed to acute diseases of the respiratory organs in the eight towns, which had been 91 and 111 in the two previous weeks, were 109 last week. The causes of 82, or nearly 14 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 24·5 and 29·7 per 1000 in the two preceding weeks, further rose to 30·0 in the week ending the 9th inst. During the first six weeks of the current quarter the death-rate in the city averaged 27·8 per 1000, whereas it did not exceed 20·3 in London and 20·7 in Edinburgh. The 202 deaths in Dublin last week showed a further increase of 2 upon the numbers returned in the two previous weeks; they included 6 which were referred to "fever" (including typhus, enteric, and simple continued), 4 to scarlet fever, 3 to whooping-cough, 2 to diphtheria, 1 to measles, and not one to small-pox. Thus 17 deaths resulted from these principal zymotic diseases, against 13 and 14 in the two preceding weeks; they were equal to an annual rate of 2·5 per 1000, the rate from the same diseases being 2·4 in London and 5·1 in Edinburgh. The 6 deaths referred to "fever" in Dublin corresponded with the number in the previous week, as did the 2 deaths attributed to diphtheria. The fatal cases of scarlet fever, which had been 5 in each of the three previous weeks, were 4 last week. Seven deaths were referred to different forms of violence, against 10 and 4 in the two previous weeks. The deaths both of infants and of elderly persons showed a further increase upon recent weekly numbers. The causes of 37, or more than 18 per cent., of the deaths registered during the week were not certified.

MORTALITY STATISTICS OF TASMANIA.

The health officer (Dr. Edward O. Gibbin) in a report to the Legislative Council estimates the mean population of Tasmania in the year 1882 at 120,701, and states that the number of recorded deaths was 1906, equal to a rate of 15·7 per 1000 for the whole island, showing a slight excess upon the still lower rate in 1881. In Hobart Town, however, which with its suburban districts had an estimated population of 27,291, the death-rate was equal to 24·4 per 1000. This high death-rate appears to have been mainly due to the large number of deaths in the Invalid Depôt situated within the Hobart registration district, but receiving aged and infirm poor from all parts of the island. The death-rate from the principal zymotic diseases was not high, being somewhat less than 2 per 1000. The rate of infant mortality, measured by the proportion of deaths under one year to births, was equal to 141 per 1000, which is excessively high compared with the rate of infant mortality in most of the other Australasian colonies. It is satisfactory to learn that good hospital accommodation for infectious diseases has been provided by the General Hospital, in addition to a small-pox hospital and quarantine station at Lindisferne. The city and suburbs, however, have at present no comprehensive system of drainage, the side channels of the streets in many places doing the duty of sewers, and hundreds of houses having no drains at all. Badly constructed cesspools abound everywhere, the contents of which soak into the surrounding ground, whence emanates an abominable stench. These and other sanitary defects are forcibly pointed out in the report before us, and constitute elements of danger to the health of the town. On the other hand, the health officer congratulates the town on being now supplied with a pure and abundant water supply.

Correspondence.

"Audi alteram partem."

WELLINGTON COLLEGE.

To the Editor of THE LANCET.

SIR,—Mr. Baldwin Latham ignores the difference between soil which has been trenched and drained and that which remains in its natural state charged with water and organic matter, and thus refuses to recognise what is a healthy and what an unhealthy soil, apart from the question whether such soil is malarial or not.

The term "marsh-miasm," which is synonymous with malaria, points to the association between marsh land and malaria, and no one can deny the existence of marsh land on the Wellington College estate, as well as the extensive expanse of marsh which stretches for miles to the south and south-west of the College.

A gentleman who made the survey of the Wellington College estate has volunteered to me the information that both he and his servant suffered from malaria in consequence. One of the worst cases of ague I ever saw was in a boy at Wellington College. Some of the boys have had enlargement of spleen, and in those who have had pneumonia and erysipelas the temperature chart marked the temperature of malarial fever instead of the well-known tracing of pure pneumonia and erysipelas.

Mr. Baldwin Latham admits the necessity for further sewerage on the estate, and he can only raise the question as to who is responsible. This aspect of the question is important. It would be manifestly unfair to impose on the small ratepayers in the district living near, but not on the estate, the burden of a heavy rate to provide sewerage on Wellington College property. While Mr. Baldwin Latham's system of sewerage is but partial, it places the College, like the ostrich with its head in the sand, in a position of self-satisfied security, but still exposed to danger from the district around and houses on the estate. Mr. Baldwin Latham writes in figurative language of my having "planted" myself near one of the marshes. I had no choice, as my duties called me there, but if he would advise the governers to do exactly what I did—namely, trench and drain the ground with a double system of land drains, and then cover over, as I did, the marsh land with six hundred loads to the acre of sweet purifying earth, brought from a distance of four miles for the purpose, he would purify and make Wellington College marshes as healthy as I think I have made mine.

The reference to my son's recovery is incorrect. He met with a grave accident in Cambridge, and was treated there throughout by Mr. Carver with a skill and success for which I cannot be grateful enough. He only returned to Wellington College when all his wounds had healed.

It is also an incorrect statement that diphtheria has only occurred at Wellington College within the last two years. The first case occurred twenty-four years ago. The present head-master's family have had diphtheria, and so did the former's; and it has occurred in a sporadic form, sometimes at long and at others at short intervals, and at last as an epidemic. But during its greater prevalence in the past two years in one term only one case occurred, so that its absence for a time is no indication of the permanent destruction of its cause. Some cases occurred before any of the houses or drains Mr. Baldwin Latham regards as the cause were in existence, and while the College and its sewerage were fresh from the hands of the distinguished architect, now dead, who designed it. I believe there is a close relationship between blood-poisoning, so-called, and diphtheria, and that these have causes apart from defective sewerage, and none more potent than emanations from marsh lands, whether malarial or not, but especially if malarial.

If Mr. Baldwin Latham had witnessed, as I have, the suffering and premature death of boys at Wellington College, which the highest skill from London was powerless to avert, and the grief of their parents, his sympathy would have been touched as mine has been; and he would not lend his distinguished name rather to check than advance the further sanitary improvements he admits to be necessary. Not one improvement would have been effected even now had I not persistently represented the existence of insanitary conditions there.

My acknowledgments are due to those in England, Scotland, and Ireland who have thanked me for having made the matter public, and to you, Sir, for the use of your columns. To have done what I have has cost me some friendships; but a medical man has higher duties than the retention of friendships when human suffering and human life are concerned. I remain, Sir, yours faithfully,

Wokingham, Berks, Feb. 14th, 1884. J. G. BARFORD.

To the Editor of THE LANCET.

SIR,—The controversy upon the endemic diseases at this school having so far exhausted itself, I may perhaps be permitted to add a few words from personal observations made in regard to one fatal case which occurred in a master's house attached to the school. Whether these diseases may have been due to a malarial origin or to more local circumstances of an insanitary nature, it is to be observed that both Mr. Barford and Mr. Baldwin Latham are more or less agreed in being "dissatisfied with most of the sanitary arrangements" and facilities upon the College estate which were in use prior to the recent improvements. Yet one cannot but feel the force of Mr. Baldwin Latham's assertion—presumably indisputable—that out of the twenty-five years the College has been in existence throat ailments have had prevalence only during the past two years. Thus preponderance of argument points to insufficiency in sanitary arrangements and facilities. And certainly this is borne out in that throat ailments are of common occurrence in places similarly situated in regard to sanitary circumstances, without any suspicion of malaria. To whom responsibility may attach that acknowledged sanitary insufficiencies should have prevailed for two years is a question which calls for decision. It is anomalous that a form of sanitary administration should have been perpetuated on the College estate, in the face of manifest (and preventable) urgency, which would scarcely be tolerated in any sanitary district in the kingdom.

In April, 1882, a young friend and connexion (*not* the son of a nobleman) died of pyæmia. To determine the origin of the cause of his death, together with his father I made an inspection of the master's house, in which he had resided; and in my investigations I received much courtesy and some assistance from both Mr. Barford and the head of the house. My report opens by saying, after referring to this particular death, "That a death from a similar cause had occurred within the precincts of the College in June last, and that during the winter term of last year (1881) and the last (or Lent) term of this year, the zymotic diseases, measles and scarlatina, had undue prevalence, together with a series of ulcerated sore-throats, are the further reasons why an inquiry into local circumstances, as a probable cause of this death, was deemed necessary." This somewhat extends the period of endemic infection beyond the given one of two years. The ventilation of the sewer drains was not considered adequate. But what called for particular remark was the system of earth-closets and their scavenging. These closets were situated in the main building (not separated by disconnecting passage) at the foot of a staircase which was in communication with the dormitory. The closets discharged into vaults which were closely sealed up, and which had no opening for ventilation but into the closets, and thus into the building. The soil, on removal from the vaults, was carried into an unprepared and uncovered yard, where other house refuse was shot, there to accumulate for about three months. This yard was situated at about four yards' distance from the house, and on to it opened the dormitory window of the "cubical" occupied by the deceased boy. The water-supply of the house was drawn from a deep well sunk under the house, and situated about twenty yards from the "soil" accumulation, and about five and ten yards from vaults on either side, other drains and soughs being in its vicinity. The result of an analysis of a sample of this water by Dr. Campbell Brown shows "that it contains the oxidised remains of organic matter of animal origin, showing that somewhere about 10 per cent. of the water has at one time been polluted before it percolated through the ground to the well." A brother of the deceased being at the Crowthorne School, an inspection was also made of these premises, where also earth-closets were in use. And here it was particularly noticeable with what scrupulous care and attention the minutest details of scavenging were performed. Distinct and separate as these two schools are, there was but little or no communication between the boys of the two schools, each school having its own playground and chapel. Thus the influence of infection in spreading diseases, as throat ailments, from one school to the other was minimised.

From the foregoing details, which carry their own comment, the fact that practically the College and Crowthorne are subject to the same atmospheric and tellurial influences; that the College boys have for a long period had diseases of blood-poisoning amongst them, whilst the younger (and more susceptible) boys at Crowthorne have not; that the sanitary circumstances in these two schools so materially differ; from these it is reasonable to infer that the blood-poisonings which had prevalence took origin from, or were due to, the sanitary surroundings of the premises in the College grounds.

I am, Sir, your obedient servant,

Denbigh, Feb. 12th, 1884. J. LLOYD-ROBERTS, M.B.

To the Editor of THE LANCET.

SIR,—Having read Mr. Barford's letters, allow me to say that I agree with every word in them. Indeed, he might have made his case stronger. Those who run may read. Look at the Wellington boys as one meets them in the grounds or on the road. I have said over and over again to persons who have been with me, "Those boys are suffering either from overwork, insufficient food, or bad sanitary surroundings." I am the medical officer of health for the district adjoining that of Wellington College, was for some time medical officer to the Poor-law District in which the College is situated, and have had other work which for about twelve years past has brought me to Crowthorne and the district, at least three or four times a week. Under these circumstances you will, perhaps, kindly find room for this letter. Mr. Armstrong could not have been serious when he questioned Mr. Barford's diagnosis.

Yours faithfully,

Blackwater, Feb. 7th, 1884. C. J. DENNY, L.K.Q.C.P.I., &c.

To the Editor of THE LANCET.

SIR,—As one interested in the welfare of the Wellington College, I hope you will allow me space to suggest that it would greatly alleviate the anxiety of parents who have sons at the College if the authorities would publish for the next twelve months a periodical (say quarterly) report showing the number of sore-throats among the boys which have been treated in the intervals. I am certain that this course would have a good effect in allaying the alarm which has naturally ensued in consequence of the late correspondence in a journal of such high authority on the subject as THE LANCET.

I am, Sir, yours &c.,

February 11th, 1884. COLONEL.

OVERWORK AMONG PUPIL TEACHERS.

To the Editor of THE LANCET.

SIR,—In the interesting annotation entitled "Mr. Mundella in Scotland," which was contained in a recent issue, it is said:—"He recognises, too, that the pupil teachers, and especially the females, are themselves victims of overpressure to an extent even worse than the children." Judging by the number of pupil teachers who break down in health, it is unquestionably quite time that the fact of overpressure was not only recognised in official quarters, but was also followed by some active steps. It is really necessary now to inquire whether the occupation, as at present defined by the code, exerts an unfavourable influence upon health; or whether the army of teachers receives into its ranks individuals whose physique is below the requisite standard of strength. Both of these will probably be found to be the case. To exemplify the unfavourable influence upon health of the work and worry, I may quote the words of a young teacher now under my care for consumption. She says: "I may safely say that I never left school at the close of the day without feeling worn out in body and mind, and quite unfit for the evening work which had to be accomplished if I wished to pass the examination creditably, and fit myself for the retaining of my appointment." Again, as one illustration of the very unsatisfactory results of the present mode of selection of pupil teachers, there occur to me the cases of no less than six young teachers suffering from

phthisis, who were no doubt quite unfit to enter upon such a trying occupation, inasmuch as a clear family history of consumption existed in every instance. The full discussion of the matter would occupy too much of your valuable space. Briefly, however, it may be said, first of all, that a more efficient system of selecting pupil teachers is required. The schoolmaster's tendency to engage for this avocation the child who is quick, bright, quiet, and good, must be narrowly watched, because such qualities in the young are too often the outcome of scrofula or want of rude health. The very prevalent notion among parents that a teacher's life is a suitable one for a child who is not strong must be counteracted; and no excuses should be listened to from managers of country schools who may experience difficulty in obtaining pupil teachers. The rigid medical certification of every candidate should be insisted on. The present instructions with regard to the medical certificate are not nearly precise enough, and the tabulated requirements do not give good or sufficient criteria of the strength of a young person. Nothing short of a list of detailed questions, based on the lines of an insurance certificate, will effect the object. It would be much better, also, to have all forms filled up by specially appointed impartial and paid officials; and no one is more fitted for this duty than the medical officer of health of each district.

The next point is that, having secured healthy young persons, proper care should be taken of their health. Managers' certificates on this matter are absurd; they ought to be altogether superseded by the periodical medical supervision of the medical officer of health, who should also display a keen interest in proper ventilation of schools, breaks in school hours, a due amount of exercise, the provision of seats, especially for young female teachers, and kindred matters appertaining to school life. There is often great need for inquiring into the circumstances and surroundings at home of pupil teachers. Then the number of scholars allotted to each teacher needs to be reduced and restricted. The Education Department considers a pupil-teacher equal to taking charge of forty children; and, although this number is too large, as a matter of fact it is often nearly doubled. The hours of continuous teaching are excessive, especially when it is recollected that daily private study has also to be carried on, in all the anxiety of preparation for the stringent annual examinations imposed by the code. The work of pupil teachers must be lightened, whether this be done by spreading the work over an apprenticeship of five years instead of four; or by shortening the school hours so that fewer hours need be spent in the intellectual labour of teaching and studying; or by the employment of a supernumerary teacher to relieve each of the pupil teachers a few hours a week in turn. Many persons perceive that pupil teachers are being virtually crushed by the claims made upon them from two quarters. On the one hand, they have to face the oppressive demands of the official code upon their scholars and themselves; on the other, they have to meet the eager strivings after large grants of over-economical managers, who seek great results but employ a wholly inefficient staff of teachers. The general question of over-pressure upon pupil teachers is a prominent and a national one; and it might form a profitable subject for another LANCET Inquiry Commission. Meanwhile, all medical men may assist by exercising the strictest vigilance when they are called upon to certify a candidate as medically eligible for the laborious occupation of pupil teacher.

I am, Sir, your obedient servant,

JAMES M. WILLIAMSON, M.D.

Ventnor, Isle of Wight, Feb. 4th, 1884.

NON-CONTAGIOUSNESS AND LOCALISATION OF CHOLERA.

To the Editor of THE LANCET.

SIR,—As a medical officer of health of great experience in India, I think it desirable to give some of the personal observation which has inclined me to regard cholera as non-contagious. Indeed, I have never seen anything to lead to a contrary suspicion. Once, while encouraging the vomiting by copious draughts of cold water, I had the vomit forcibly ejected against my face and some of it into my mouth, without any ill effects. Nor can I consider the atmosphere of a hospital infected simply because cholera is being treated in it. I have lived much in such an atmosphere, and undergone long-continued anxiety and fatigue in close attendance upon the cholera patients; nor have ever known a case show itself there unless the subject had been admitted but a short time before, or the hospital was unquestionably within the range of the disease. I have strong reasons for believing that cholera affects definite localities, and that removal even to a short distance from the infected place will often withdraw a person from its influence. I have found such removal completely successful, and that, too, with large bodies of men; the single exception being with the 12th Native Infantry, but then vacant space would not admit of the regiment's position being shifted beyond the immediate neighbourhood of its lines. Besides, there was a strange peculiarity about this outbreak well marked in other respects. All the Hindoos attacked were flesh-eaters, and they, with the Mussulmans and Jews, were indiscriminate victims, the rice-looking vomit holding large quantities of tapeworm. This immunity of the vegetarians, of whom there were many, was the more remarkable, as in all the many other outbreaks I have seen among the natives, Brahmins, the most rigid abstainers from flesh, fowl, and fish, were as often attacked and killed by the disease as were persons of any other caste or class. The first experiment of changing the locality was tried in 1841 at Ahmednugger, where cholera had broken out in the gaol, and the prisoners were, at my suggestion, removed some distance, with a result which obtained for the assistant judge in charge a most flattering recognition from the Supreme Court of Judicature in Bombay. Once, when on tour as the superintendent of vaccination in the Deccan, I happened to be at Nassick, a very hotbed of Brahminism, during a most prevalent and fatal outbreak of cholera. The disease was confined to the town-side of the Godavery, and it was only when the numerous cotton-carriers from Khandish had crossed the half-dried bed of the river that they first got cholera or met with it on their route. A circumstance that occurred during the last Burmese war connected with the steam frigate *Moozuffer*, of which I was then the surgeon, may here be mentioned. We were lying off Rangoon, and had sent five of our boats to reinforce Captain Tarleton, R.N., at Pantano, two days' row up the river. On the eve of returning five men of the crew of one of the boats were suddenly seized with cholera, all of whom died. Three lived to reach the ship, and one, a case of febrile reaction, was several days under treatment on board; and yet we had no other case. A more striking circumstance still, attending the wreck of the above-named vessel off the mouth of the Irriwaddy some months afterwards must not be omitted. We had been lying on a quicksand for six days, with the water reaching the orlop deck, when the vessel suddenly settled down, and we were rescued with much difficulty by the boats of the steam frigate *Zenobia*, after being five hours in the rigging, and nearly washed away by the tremendous rush of a spring tide and a rough sea. At the time we grounded we had cholera on board, and while on the wreck we were enveloped in a muggy atmosphere from the steam of moistened grain and other provisions; so that whereas there was not, nor had been, any cholera on the *Zenobia* when we reached her, two cases showed themselves there the next morning, and these were those of our purser, Stockham, and Assistant-Surgeon Hunter (now Surgeon-General, and employed as Government reporter on the cholera in Egypt), the former of which proved fatal. Nevertheless, these were the only cases that occurred on the *Zenobia*, although she received and entertained for more than a fortnight all our officers and crew, including our assistant-apothecary, convalescing from cholera, who, with the rest of the sick, had been removed before the ill-fated vessel settled down. It was therefore evident that no infection was transferred from the one ship to the other, but that whatever there was must have been located in the *Moozuffer*. I am, Sir, yours faithfully,

HENRY DUNN GLASSE,
Substantive Deputy Surgeon-General,
Guernsey, Dec. 15th, 1883. H.M. Bombay Army, retired.

To the Editor of THE LANCET.

SIR,—Your article of this week on cholera contains the following sentence:—"Dr. Hunter has no hesitation in asserting that cholera is not a contagious disease." Will you allow me to lay before your readers a short account of an experience of fifty years ago, which, in my opinion,

affords an overwhelming evidence to the contrary? Towards the end of the summer of 1832 a man named Tomlinson, employed as a canal boatman, returned from Gainsborough, where cholera was raging, to his own house at Borrowash, a small village about five miles from Derby. He was there seized with unmistakable Asiatic cholera, and was attended by my father and myself. He died, having been nursed during his illness by his wife alone. In a few days his wife sickened with symptoms as unmistakable as those of her husband, and like him she also died. A woman from the village who had been called in to nurse her was next attacked, and such was the terror of the neighbours at this third case, such their not unreasonable belief in its contagious nature, that it was only with the utmost difficulty that anyone could be found to come near the patient. At last a woman living half a mile away was found willing to undertake the task, but the patient died, and, finally, a fourth victim was added to the list in the person of the last-named attendant, who shortly sickened and succumbed to the disease. All these four persons died of undoubted Asiatic cholera; but no other case occurred in the village or at any other place nearer than Derby, where from twelve to fifteen persons died, at the post-mortems of all of whom I attended. With these facts impressed upon my mind, it is not, I think, strange that I should have adopted and retained the belief that cholera is in the ordinary sense of the word contagious. I trust that you may be able to find room for the insertion of these facts, as I doubt whether they have ever before found their way into print, and consider that they form as strong a chain of evidence as could be supplied naturally on the subject.

If further particulars be desired, I do not doubt that I could supply information as to the date of termination of each case, and should be glad to do so if any of your readers so request.

I remain, Sir, your obedient servant,

Spondon, Derby, Jan. 22nd, 1884. THOMAS CHARLES CADE.

"WASHING OUT THE URINARY BLADDER."

To the Editor of THE LANCET.

SIR,—The washing out the bladder in cases of cystitis, from whatever cause, is one, as Dr. Collins has truly remarked in your issue of the 2nd inst., which is followed with so much comfort that it has always surprised me it is not more frequently or systematically done. It is now many years since I pointed this out in some lectures published in your journal on the diseases of the female bladder, and I then recommended various medicaments to inject. Especially is relief obtained in cases of ammoniacal urine; and I have always found the injection of an acidulated warm water the most beneficial; about one drachm of dilute nitric acid, or hydrochloric acid, to half a pint or one pint of water is a good proportion. Even vinegar and water answers well, and I always prefer to leave a little behind when the bladder has been well irrigated. This forms a little stock in hand for an hour or so, and I have generally found it well tolerated. But I do not propose to enlarge on the topical treatment. The purpose of this communication, suggested by Dr. Collins' paper, is to point out a way I have adopted many years, and taught, at Guy's, whereby is caused the least annoyance possible in washing out the bladder. I employ an open-ended catheter, or "cannula," the technical name, I believe; with this I draw off the urine, passing it no further than absolutely necessary. I mark the point on the catheter if possible. When the bladder is empty I withdraw it half an inch—that is, outside the sphincter. When I inject I leave it still outside. There is no difficulty, the fluid passes easily through the sphincter; after it has remained two or three minutes within, the catheter is passed gently back the half inch or so and the fluid just injected escapes. This can be repeated as often as desirable. If it is intended to leave any injection in the bladder, it can be done in the same manner without the entry of the catheter. By this means the bladder is spared any irritation or damage, and, although the plan recommended by Dr. Collins is very excellent, I have found a two-ounce syringe, with a very tapering nozzle, answer very well. It will easily fit any catheter, and can readily be removed from it.

I am, Sir, yours obediently,

BRAXTON HICKS, M.D., F.R.S.

George-street, W., Feb. 1883.

VITAL STATISTICS OF THE PEABODY BUILDINGS.

To the Editor of THE LANCET.

SIR,—I have read with great satisfaction your paragraph on the "Vital Statistics of the Peabody Buildings" in THE LANCET of the 9th inst. The fact is that the actual death-rate of the Peabody and other model Industrial Dwellings is unknown, however frequently it may be given and quoted. It is of so much importance that it should be thoroughly worked out that I do not feel satisfied with your suggestion that the trustees should furnish more detailed statistics. I think the Local Government Board ought to entrust the whole subject to one of their skilled medical statisticians for inquiry and report. I can state that in Glasgow we should welcome the results of such an inquiry. We wish to have in a compact authentic form information (1) as to the size of the houses, the persons per room and per house, the average cubic space per person, and such-like measurable facts as to the physical circumstances of the inhabitants; (2) the age, occupation, earnings, nativity, and such other facts as to the inhabitants as will show clearly who and what they are; (3) the process of selection by which the inhabitants are obtained, and of supervision under which they are kept, the financial results, with classified details, &c.; (4) the carefully compiled birth and death statistics of these inhabitants. I am aware that data published would enable some of this information to be compiled, but not all, and I repeat that a report containing this and the like information would at this juncture be a work of national importance.

I am, Sir, your obedient servant,

JAS. B. RUSSELL, M.D.

Sanitary Department, Glasgow, Feb. 12th, 1884.

LIVERPOOL.

(*From our own Correspondent.*)

THE MEDICAL FACULTY, UNIVERSITY COLLEGE, LIVERPOOL.

THE movement for procuring the affiliation of the Liverpool University College with the Victoria University has so far been successful. The meeting for its promotion was largely and influentially attended, and the following resolutions were carried unanimously:—(1) "That in the interests of higher education in Liverpool, and to secure the inhabitants of the city and neighbourhood direct access to University degrees in Arts, Science, and Medicine, the incorporation of University College in Victoria University is an urgent necessity." (2) "That a fund be raised to endow the additional professorships and lectureships required as conditions of the incorporation of University College in the Victoria University, and to defray the necessary expenses." The two additional professorships required are those of Latin and History; the supplementary lectureships those of Mathematics, Chemistry, Geology, and Political Economy. The sum required for these and for the completion of the new chemical laboratories will amount to £50,000. Towards this a considerable sum has been already raised, and it is confidently expected that the remainder will soon follow.

RESIGNATION OF DR. WATERS.

The resignation of Dr. Waters, Professor of Medicine, has been received, and at the close of the present session he will sever a connexion of twenty-nine years with the Liverpool School of Medicine—first as lecturer on Anatomy, then on Physiology at the Royal Infirmary School of Medicine, and subsequently as Professor of Medicine, Liverpool University College. Dr. Waters is president of the British Medical Association, and senior physician to the Liverpool Royal Infirmary, the students of which will still have the benefit of his clinical teaching, and the patients of his experience. Dr. Waters is also well and favourably known as an authority on chest diseases.

THE SOCIAL PURITY MOVEMENT.

A meeting was held at the Town Hall last week, presided over by the Earl of Lathom, at which Miss Ellice Hopkins was the principal speaker. She deplored the prevalence of immorality in Liverpool, which she considered as only second to London in unenviable notoriety as regards the

social evil, and she denounced in unmeasured terms the inadequacy of our local Acts to deal with brothels and juvenile prostitutes. In this, as in the matter of labourers' dwellings, the efforts of all medical workers were wholly ignored. Now that noble lords and ladies have made it fashionable to notice such subjects, we may hope that what has hitherto fallen on deaf ears may receive a little attention. By a strange though not uncommon contradiction, it unfortunately happens that Miss Hopkins is a strong opponent of those very Acts which have done more to suppress brothels and juvenile prostitution than can ever be achieved by misguided efforts to promote social purity.

HOSPITAL SUNDAY COLLECTIONS.

In spite of the recent depression in trade and commerce, the amount collected on Hospital Sunday reaches the sum of £7260. The result of Hospital Saturday this year will be watched with interest, there being a very strong feeling prevalent that the working men of Liverpool might reasonably be expected to equal, if they do not excel, their brethren in Glasgow and Birmingham in supporting institutions which are such blessings to man in times of accident and sickness.

THE HOSPITAL FOR WOMEN.

This hospital, which with the dispensary attached is an offshoot of the Liverpool Lying-in Hospital, of which it was an integral part, has been opened more than six months, and the first annual report has been published. From this it appears that the thirty beds provided in it have been fully utilised, and, as the premises are capable of holding many more, it is hoped that these will be found. The attendances at the dispensary average 250 a week.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

THE NEWCASTLE LYING-IN HOSPITAL.

THIS is one of our most useful special institutions, yet the accommodation it affords is limited, especially when the growth of the district is considered. It was therefore pleasing to notice that at the late annual meeting of governors (at which Dr. Gibson presided), while the report showed that 349 cases had been attended during the past year without a single death, the committee recommended the desirability of the extension of the hospital being soon brought before the public, or the building of a new maternity hospital on improved modern principles, where more cases could be attended in the hospital itself, where nurses could be trained, and students educated, with private wards for paying patients, and a separate wing for the diseases of women and children.

ALNWICK DISPENSARY.

This institution appears to be well managed on the provident system, yet at the annual meeting the other day the committee expressed surprise that the institution was not better supported by the working classes, for whose benefit it was established, and whereby they could assure medical attendance for themselves and families for a small monthly payment. The report, however, shows that after the payment of all expenses there remained a small balance in hand, while a payment of nearly £375 had been divided amongst the medical officers. It should be remembered, however, that the ducal town of Alnwick is small, and a very large proportion of the resident working classes are in very comfortable circumstances, and so they may prefer to select and pay their own medical men in the usual way. Here in Newcastle the provident dispensary system has been tried many times, and always failed; there seems to be something in the northern air—or disposition, to speak more correctly—adverse to its growth. People either go to our charities, which are numerous and well managed, or they go to medical men who have the wisdom to adapt their fees to the resources of the working classes. Some of our most successful practitioners have commenced in this way.

NEWCASTLE INCURABLE HOSPITAL.

The election of medical superintendent to this new institution took place last week, and excited some interest in the profession from the high standing and the number of candidates. The Town Council, however, made very short work of the election by appointing Mr. J. A. Angus, of this city, to the post, by a very large majority over all comers. The selection is felt here by the profession and the public to be a wise one, for Mr. Angus is highly respected by his medical brethren, while at the same time he is one of our most popular practitioners.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY.

The annual meeting of the Sunderland Eye Infirmary was held lately. From the report it appears that 1088 patients have been treated during the past year, while ninety-seven operations had been performed on the eye. An effort is in progress to pay off a debt of £900 which rests on the institution; but the people of Sunderland should consider that this debt rests upon *them*, and at once remove it. The nature of the industries of Sunderland must always give rise to affections of the eye, and to the increasing necessity for their prompt and skilful treatment.

Newcastle-on-Tyne, Feb. 13th, 1884.

HOSPITAL WITH CIRCULAR WARDS.

(From a Correspondent.)

FOR some time past an attempt has been made to raise the funds needed to provide hospital accommodation for the town and district of Burnley, Lancashire. The population exceeds 100,000 persons. In addition to the sum of £1500, as the nucleus of an endowment fund, the committee have succeeded in obtaining subscriptions to the building fund to the amount of £12,600; and a site of two acres in extent has been given, with a handsome subscription of £1000, by the executors of Colonel Hargreaves. Towards the building fund over £3000 has been contributed by the working classes within a period of nine months, the result of a systematic collection at the mills and workshops every four weeks. These collections the committee have suspended for the present owing to the disturbed state of the cotton trade throughout the district; but they hope to be able to resume them before long. The plans approved by the committee provide for the erection of a hospital with one-storey pavilion wards of the circular form, as suggested by Professor Marshall, President of the Royal College of Surgeons. Two of the wards are to be built at present with an internal diameter of sixty feet, for the accommodation of twenty beds each. The architects, Messrs. W. Waddington and Sons of Burnley and Manchester, have designed a sun room or day room on the top of each ward, with a promenade twelve feet wide all round it. Access to the roof is given by a gently sloping spiral staircase surrounding the smoke and extraction flues and occupying a closed-in space in the centre of the ward sixteen feet in diameter. There is thus left for the ward itself an annular space twenty-two feet in width. The height of the ward at the eaves is fifteen feet, and at the inner portion sixteen feet. The roof is formed of concrete supported on iron girders. The lineal wall space of the ward is 189 feet, giving an average wall space per bed, excluding doors, of about eight feet four inches. The floor space is 132 square feet, and the cubic space 1560 cubic feet per bed. Windows are placed between each bed, extending from two feet and a half from the floor to within about a foot of the ceiling; and ample provision is made for ventilation, both at the floor level and at a height of about seven feet. From the inner part of the ceiling and also from the floor, ventilating outlets are led to an extraction shaft which encircles the smoke flues. The walls of all the wards, watercloseta, and bath-rooms are to be of glazed bricks or tiles, the floors of the wards are to be of oak beea-waxed and polished. Separated from each ward by a cross-ventilated corridor are the bath-room and watercloseta. Connecting the circular ward with the main corridor is a well-ventilated passage, on either side of which is a single-bedded separation ward; and between these wards and the circular ward are the nurses' rooms and the ward scullery. A subway is provided from the cellar floor of the administrative block to the wards; in this all pipes will be laid, and along it coal, soiled linen, cinders, and sweepings may be conveyed. Provision is made on the site for the addition of four other wards similar in size to those described, and also for a children's ward of fourteen beds. This is intended to be forty feet in diameter, to have no central staircase or sun room, and to have a dome-shaped ceiling.

SCOTTISH NOTES.

(From our own Correspondent.)

THE MEDICAL BILL.

A MORE hopeful tone regarding the issue of the Scottish difficulty concerning the Medical Bill is felt owing to the speech of Sir Lyon Playfair; but it should be remembered that, while other representative orators were profuse in mutual compliment on the same occasion, they yet nailed their colours to the mast much in the old spirit: they only wanted their just rights, &c., and then the reign of good fellowship would be inaugurated; but regard for the good feeling so abundant at the meeting prevented any reference to details. It is questionable whether the universities and corporations have been brought much nearer by the lapse of time, and if the real truth were known it would be found that neither party have any liking for the Bill. The question of representation on the divisional board was a godsend to the corporations, as it allowed them a respectable pretext for fighting against the Bill while appearing only as objectors to a particular clause; but on the night when their opposition was so entirely successful, it was known that they could have had five instead of three delegates allowed them, and no neutral party will be found to affirm that they would not in that case have been fully represented. The truth is that the views of Prof. Huxley on the general question, in this month's *Nineteenth Century*, are a close approximation to those generally held north of the Tweed; they were expressed in the *Scottish Review* before last year's Bill was introduced; and if the question of representation can be settled through the good offices of Sir Lyon Playfair or Dr. Campbell, they will be much heard of from the Scottish members when the Bill is discussed in the House. During the recess neither the corporations nor the universities have been idle; but it seems that the former bodies have not yet concluded their negotiations regarding the withdrawal of the single qualification and the sale of Fellowships. Without such internal reforms, admitted on all hands to be necessary, the corporations must appear at great disadvantage before Parliament; and it is to be hoped that ere long their scheme will be complete. The universities have adopted no cast-iron policy, and will be guided by circumstances. It will probably be found, when the Bill makes its appearance, that some modification has been made in the proportional representation of at least the Scotch authorities, but the question is of exceeding difficulty to an impartial Minister.

PAUPERISM IN SCOTLAND.

From a return just issued by the Board of Supervision, the total and proportional number of paupers in Scotland is seen still to be on the decrease. At the commencement of 1883 there were 100,153 registered and casual poor, while on January 14th last, with an estimated increase in population amounting to about 38,000, there were but 96,655 in the same classes. The percentage of paupers to population has decreased from 2·63 to 2·51. Generally, it may be said, that all the large towns, except Edinburgh, show a diminution in the pauper roll. Though we sometimes hear of the rather harsh use of the poorhouse test, it must be allowed that such cases are rare, and hence the above statement is gratifying.

An amalgamation of the various natural science societies in the east of Scotland (north of Edinburgh) has been formed, with Dr. Buchanan White, F.L.S., as president, and Mr. Young, of the High School, Dundee, as secretary. The first annual meeting will be held at Dundee on the 6th and 7th of June next.

In anticipation of the visit of the British Association to Aberdeen in 1885, a preliminary meeting has been held and organisation commenced. Professor George Pirie, Dr. Angus Fraser, and Mr. Edmond are joint secretaries to a provisional local executive committee, nominated for the purpose of raising a guarantee fund for the expenses of the meeting and for carrying on any necessary business in the meantime.

By a curious printer's error I was made last week to speak of "stores and linen" instead of "stone and lime."

PARIS.

(From our Paris Correspondent.)

THE ACADEMY OF MEDICINE.

THE Academy seems to be growing less and less interesting, if one may judge from the small number of members who have been attending it for some time past. At the meeting of last week there were so few present (scarcely a dozen) as to call forth the displeasure of M. Alphonse Guérin, the President, who expressed himself to that effect, and actually requested the reporters present to notice the fact in their respective journals. It has been remarked that it is only on election days that the Academy shows a pretty good muster, and that the absentees are generally to be found among the younger members. It must, however, be admitted that the meetings of the Academy, or rather the discussions that have taken place in it lately, are anything but interesting; little is to be learned from them, as the members go over ground that has already been traversed several times, old subjects merely being introduced under a new garb, and frequently left as before—that is, without any solution of the question submitted for discussion. Your readers will remember the prolonged debate on typhoid fever, which ended *verba et voces prætereaque nihil*, and which closed with the past year. The subjects for discussion do not seem to open under more favourable auspices this year. Pasteur's theory holds its own, and the discussions on the virulence of tuberculosis threaten to become violent and unacademical. It will be remembered that Professor Germain Sée made a very important communication on the presence of bacilli in the expectoration of phthisical patients, which he said was pathognomonic of pulmonary tuberculosis even in its incipient stage. This M. Colin, member of the Section of Veterinary Medicine, endeavoured to refute, but whether he has done so successfully or not remains to be seen. In reply, M. Sée twitted him about the invalidity of his opinion, as his experience was only confined to horses. Prof. Villemin then entered the field, and after an excellent discourse, recalling to mind the experiments he had performed so many years ago, reproached M. Colin with having subverted in 1884 what he enunciated in 1879, to which M. Colin has not yet responded. Meanwhile the subject of trichinosis has been brought forward. Here, again, M. Colin has taken a conspicuous part. He has proved that notwithstanding the various media by which trichinosis may be communicated, yet such an affection is extremely rare in man, at least in this country. He has, moreover, shown that when pork contains trichinæ, the latter are destroyed by salting the pork and submitting it to a high temperature, as in ordinary cooking. M. Colin has ascertained experimentally that, on an average, about fifteen to twenty days after the salting of the pork the trichinæ are completely destroyed; nevertheless, in pieces of large size, they may live two or three months in the tissues; consequently that imported from America is not so dangerous as the trichinophobists would wish to make out. The report of Dr. Proust, who was sent to Havre to investigate the matter, is to the same effect, and recommends that the prohibition on American pork should be removed. This proposition was put to the vote at the Academy, and was all but unanimously adopted.

A panorama of prehistoric subjects, painted by Castellany, is to be opened on March 15th at the Jardin d'Acclimatation, which promises to be very interesting.

Dr. Tarnier, agregé, and surgeon of La Maternité, has been appointed Professor of Obstetrics at the Faculty of Medicine of Paris, in succession to Professor Pajot, transferred to the Clinique d'Accouchements.

Paris, Feb. 13th, 1884.

THE BOWER AND KEATES CASE.

THE Committee have received a cheque for one guinea from Francis Willis, M.D., M.R.C.P.L., Asheville, North Carolina, U.S.A., which was sent before the list was closed.

All sums received since January 26th have been returned.

Erratum.—In the final list published on Feb. 2nd, for B. Harvey, Esq., read "B. Harris, Esq."

F. A. MAHOMED, } Hon. Secs.
R. W. BURNET, }

THE ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council of the Royal College of Surgeons of England, Mr. Erichsen, having asked and received permission to make an alteration in the motion of which he had given notice (see THE LANCET, Jan. 19th, p. 122), moved—"That, in accordance with Section 18 of Bye-laws, the President be requested to convene a meeting of the Fellows and Members of the College for the following purposes—viz., To report to the Fellows and Members the alterations in the Charters proposed by the Council, and to receive from them any suggestions or recommendations with respect to these or any other alterations in the Charters which they may have to offer for the consideration of the Council." This was seconded by Mr. Cadge, and carried unanimously. The President and Vice-Presidents were appointed to report to the next meeting of the Council on the necessary arrangements for holding the general meeting of Fellows and Members. Though the time has not yet been fixed, this meeting will probably be held on or about the 27th of March next.

A third Report of the Committee, on the mode of election, &c., was presented. The Committee was of opinion that it would be inexpedient to make any alteration in Section 14 of the Charter 7 Vict., pp. xxxviii. and xxxix, of the Calendar, relating to substitute members of the Council.

The President was appointed to represent the College at the Tercentenary celebration of the University of Edinburgh, and also to represent the College at the Medical Congress at Copenhagen.

THE SERVICES.

Deputy Surgeon-General J. J. Thompson has been placed under orders to proceed from Aldershot to Dublin to assume the duties of principal medical officer on the staff of the general officer commanding the troops in Ireland.

MADRAS MEDICAL ESTABLISHMENT.—Surgeon-Majors Charles Thick Eves, David William Trimnell, and Charles Abdy Andrews to be Brigade Surgeons.

ADMIRALTY.—The following appointments have been made:—Staff-Surgeon James H. Martin, to the *Euryalus*, for service with the Royal Marines in Egypt; Staff-Surgeon William B. Drew, to the *Alexandra*, for service with the Royal Marines in Egypt; Surgeons Michael J. M'Carthy, M.D., and Nicholas C. Ross, to the *Alexandra*, for service with the Royal Marines in Egypt; Surgeon James S. Wray, to the *Woodlark;* Surgeon Gilbert Kirker, to Haslar Hospital, vice Collins; Surgeon Henry B. Collins, to the *Indus*, vice Walsh; Surgeon Henry W. D. Walsh, to the Plymouth Division of the Royal Marines, vice Ross; Surgeon George W. F. Armstrong, to the *Albacore;* Surgeon John B. B. Triggs, M.B., to the *Express.*

RIFLE VOLUNTEERS.—2nd Cornwall (Duke of Cornwall's): John Kempthorne, Gent., to be Acting Surgeon.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons on Thursday, the 7th inst., a report was presented upon the heavy sizing of cotton, and its effect upon the health of the operatives employed.

Educational Pressure.

On Monday, in reply to Mr. Stanley Leighton, the Vice-President of the Council stated that there was nothing in the evidence to support the inference that the death of a schoolboy at West Bromwich was caused by the pressure used to force him through the examinations of the code. The local school board were inquiring into the case, with special reference to the question of unauthorised punishments.

On Tuesday, Mr. Raikes gave notice of a question referring to Dr. Crichton Browne's published opinion as to the fatal effects of overwork in schools, and calling upon the Education Department to make an inquiry into the matter.—The Lord Advocate admitted to Dr. Cameron that a schoolmaster at Lochgoilhead had habitually punished children by pouring castor-oil down their throats.—Mr. Mundella postponed his reply to a question by the same hon. member as to the intended action of the Education Department.

Disease in the Navy.

Mr. Campbell Bannerman, replying to Sir H. D. Wolff, confirmed the statement that orders were some time ago issued directing that seamen suffering from the simpler form of venereal disease, which was not syphilis, and which was quite capable of being treated on board ship, should not be detained in hospital, but should be sent to sea in the regular course of their service.

The Recent Medical Prosecution.

Sir Trevor Lawrence asked by whose authority the Public Prosecutor supported a criminal information against Dr. Bower and Mr. Keates at Lambeth Police-court on Sept. 11th, 1883, for the manslaughter of a child by the improper performance of the operation of tracheotomy.—The Attorney-General said the Public Prosecutor acted on his own responsibility, and, as he believed, acted quite rightly. He did not institute the prosecution, and only, in response to repeated applications, sent a solicitor to watch the case. There would be no compensation given, but the Government were sorry that these gentlemen should have been subjected to the annoyance of proceedings. It was true that the magistrate characterised the prosecution as a "persecution," but that did not apply to the action of the Public Prosecutor, whom the magistrate thanked for his assistance in eliciting the facts.

Erysipelas and Vaccination.

Mr. G. Russell, replying to Mr. P. A. Taylor, said the Local Government Board were aware that at a branch meeting of the British Medical Association in December last a statement was made by a private medical practitioner as to certain cases in which erysipelas had followed vaccination. No particulars as to the names, &c., of the children vaccinated were given. It was not alleged that the children were vaccinated by a public vaccinator, nor was there any suggestion that the lymph was obtained from the National Vaccine Establishment. The Board had not received any communication on the subject of these cases from the medical practitioner by whom the vaccinations were performed, from any of the parents or relatives of the children who were stated to have suffered from erysipelas, or from any person residing in the locality. The Board, under these circumstances, had not directed any inquiry by one of their inspectors. The gentleman by whom the statement was made at the meeting was not in any way subject to the jurisdiction of the Board, and the Board had no right to require him to give information as to his private patients.

Artisans and Labourers' Dwellings.

On Thursday, Sir R. Cross asked the President of the Local Government Board whether his attention had been called to the report of the Committee on the subject of Artisans and Labourers' Dwellings, 1882; and whether it was his intention to bring in a Bill, without delay, to confer upon the local authorities, in places near London but outside the jurisdiction of the Metropolitan Board of Works, additional powers with regard to new buildings, as unanimously recommended by that Committee.—Sir C. Dilke said the Select Committee of 1881–82 recommended that many of the sanitary provisions of the Metropolis Building Act should be extended to suburbs under the control of sanitary authorities; and the recommendations seemed to have been made on the assumption that in those districts the law as to the construction of buildings was insufficient or inferior to that applicable to the metropolitan area. The evidence submitted to the committee was of a vague and meagre character, as no officers of suburban local authorities appear to have been examined. The urban authorities in the suburbs were empowered under the Public Healths Act to make bye-laws which might be enforced by penalty, and the rural sanitary authorities were in almost all cases invested with similar powers. It did not appear necessary to provide additional powers.—Sir R. Cross asked whether the right hon. baronet considered the existing provisions in every sense satisfactory.—Sir C. Dilke replied that that raised the very much wider question as to the composition and nature of the local authorities who administered the laws. His own opinion was that an improved system of local government throughout the country was necessary.

Proposed Hospital at Winchmore-hill.

Mr. Coope asked the President of the Local Government Board what application was made by the Southgate Local Board to the Local Government Board with reference to the

purchase of a site at Winchmore-hill, by the Metropolitan Asylums Board, for the purpose of the erection thereon of a convalescent fever and small-pox hospital; and why no opportunity was afforded to the Southgate Board of being heard before the decision of the Local Government Board.—Mr. George Russell replied that the department saw no sufficient reason to withhold their consent from the application. A letter was received from the Local Board asking that a deputation should be received on the subject, but the Board did not consider that was necessary. The proposal was to purchase a site for a convalescent fever hospital, and not a hospital for fever and small-pox patients.

The Patent Medicines Bill is the first order for Wednesday, March 26th, and Dr. Cameron's Cremation Bill stands first for Wednesday, April 30th. The Lunatics (Ireland) Bill is down for May 7th, and the Private Lunatic Asylums (Ireland) Bill for June 11th. The second order for May 21st is the Dwelling-houses Inspection Bill. The Vaccination Acts (Compulsory Clauses Repeal) Bill has the first place for July 16th. Dr. Cameron will move an amendment as follows:—"That while it is inexpedient to abolish compulsory vaccination, our vaccination laws might with advantage be amended in other points of detail."

Medical News.

APOTHECARIES' HALL. — The following gentleman passed the examination in the Science and Practice of Medicine, and received a certificate to practise, on Feb. 7th:—

Hillstead, Herbert John, Lewisham High-road, St. John's.

AT a recent meeting of the Keighley Town Council it was stated that lead poisoning was increasing in the town, and samples of the town's water have been taken with a view to analysis.

THE annual meeting of the Bournemouth Medical Society was held on the 6th inst., when a paper was read by the president, Dr. P. G. W. Nunn, on the Rise and Progress of Bournemouth.

ROYAL INSTITUTION.—Professor Arthur Gamgee, M.D., will give the course of five lectures on "Animal Heat, its Origin, Distribution, and Regulation," commencing on March 4th, instead of Professor McKendrick, M.D., who will probably lecture after Easter.

AT the weekly meeting of the Liverpool Health Committee, Dr. Taylor, the medical officer of health, stated that the rate of mortality during the week ending the 2nd inst. was 19·1 per 1000, the lowest death-rate for the city ever recorded.

PRESENTATION. — Mr. Julius Cæsar, L.R.C.P., L.R.C.S., on the occasion of his marriage, was presented by the members of the Victoria Dock District Dispensary, with an army regulation operating case and a fully furnished Barnes' obstetric bag.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At the meeting to-day (Friday), at 8 o'clock P.M., a paper will be read, entitled "Remarks on the Examination of Water for Sanitary Purposes," by C. E. Cassal, F.I.C., F.C.S., and B. A. Whitelegge, M.D., B.Sc., S. Sc. Cert. Camb.

THE PHARMACY ACT.—A resolution appointing delegates to join a deputation of the Pharmaceutical Council to wait on the Privy Council in support of the general basis of the new Bill to amend the Pharmacy Act was adopted at a special meeting of the Chemists and Druggists' Association of Great Britain, held at Birmingham on the 8th inst.

PROPOSED HOSPITAL FOR INFECTIOUS DISEASES AT TOLWORTH.—Mr. Arnold Taylor and Dr. Thorne Thorne, inspectors of the Local Government Board, held on the 4th inst., at Kingston, a second inquiry into the subject matter of a petition from the Kingston Rural Sanitary Authority, asking for a provisional order to empower them to put in force, with reference to certain lands required for a site for an infectious diseases hospital, the Lands Clauses Consolidation Acts with respect to the purchase and taking of lands otherwise than by agreement.

A DINNER was given last Monday by the President of the Irish College of Surgeons to celebrate the 100th anniversary of that institution.

WEST BROMWICH HOSPITAL.—The half yearly meeting of the governors of this hospital was held on the 29th ult. The number of in-patients treated was 192. The number of out-patients 2005, being a marked increase on the previous half year in both cases. The Hospital Saturday Committee has paid over the balance of last year's collections, £684 2s. 3d., making the total amount received from this source of income £1184 2s. 3d. The sum of £150 was also received from Hospital Sunday collections. The total from all sources to Dec. 31st was £3487 16s.

DONATIONS TO HOSPITALS.—A donation of £1000 has lately been presented to St. George's Hospital by an old governor, after a minute inspection of the hospital, as a mark of his satisfaction with all he saw as to the condition of the wards and general comfort of the patients.—Sir Massey Lopes has presented a third donation of £1000 to the funds of the New South Devon and East Cornwall Hospital.—A cheque for £500 has been received from Mrs. Langworthy by the secretary of the Manchester Hospital for Consumption and Diseases of the Throat.

ROYAL FREE HOSPITAL.—The annual meeting of the directors of this institution was held on the 7th inst., when a highly satisfactory report was presented. The receipts during the past year amounted to £10,958 and the total ordinary expenditure to £10,604. The number of in-patients admitted into the hospital during the year was 1772, being the largest number ever received. The daily average number of patients in the wards was 133, against 124 in 1882. The number of out-patients who received advice and medicine was 21,142.

BIRMINGHAM LYING-IN CHARITY. — The annual meeting of this charity was held on the 6th inst. The report showed that the number of patients attended during the year by the four midwives was 870, against 894 of the previous year. There were two deaths of mothers, the health of every mother and infant being ascertained thirty days after delivery. The number of children born alive was 839—419 males and 420 females. There were six cases of twins. The assistance of the honorary surgeons was called in thirty-six times.

THE UNIVERSITY OF DURHAM.—A very successful meeting and dinner of the London Branch of the Durham University Association was held last month. The meeting was influentially attended, and it was decided to hold the next one in May, previous to the great meeting and dinner to be held in Durham on July 2nd, under the presidency of the Lord Bishop of Aberdeen and Orkney. The dinner was held at the St. James's Restaurant. The Hon. and Rev. G. W. Bourke, M.A., occupied the chair, and the vice-chair was filled by Dr. T. T. Pyle. Amongst those present were E. G. Marshall, Esq., Major Shifner, Revs. C. J. Robinson, W. Jowitt, N. G. Pilkington, Duffield; Drs. Macintosh, Travers, Bedford Fenwick, Tyson, and others. The University took the opportunity of the Duke of Albany's recent visit to confer on His Royal Highness the degree of D.C.L.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ANGUS, J. ACWORTH, M.R.C.S., L.S.A.Lond., has been appointed Medical Superintendent to the Hospital for Incurables, Newcastle-upon-Tyne.

COOMBS, ROWLAND HILL, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Goldington District of the Bedford Union.

DONALD, JAMES, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Kingston District of the Kingston-on-Thames Union.

EMERSON, P. H., B.A.Cantab., M.R.C.S., has been appointed Sambrooke Medical Registrar to King's College Hospital, vice J. F. Silk, M.B., resigned.

FITCH, RICHARD A., M.R.C.S. & L.R.C.P.Ed., has been appointed Resident Surgeon to the Birmingham General Dispensary.

FOREMAN, JOSEPH, L.R.C.P.Ed., M.R.C.S., has been appointed Obstetric Physician to the Prince Alfred Hospital, Sydney.

GRAY, EDW. BENJAMIN, M.D.Oxon., M.R.C.S., has been appointed Honorary Physician to the Radcliffe Infirmary, on his resignation of the office of Physician.

GRIFFITH, W. S. A., F.R.C.S., M.R.C.P.Lond., Tutor in Obstetrics and Gynæcology at St. Bartholomew's Hospital, has been appointed Physician to Out-patients at the Samaritan Free Hospital.

GRINDON, FRANCIS JAMES, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer and Public Vaccinator to the Olney District, Newport Pagnell Union.

GROOM, WILLIAM, jun., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Tenth B. District of the Wisbech Union.

HARGREAVES, J. B., F.R.C.S. &c., (of Wellgarth House, Armley) has been appointed Consulting Surgeon to the Imperial Union Accidental Assurance Company for the Leeds District.

HOWITT, WM. GODFREY, M.R.C.S., has been appointed Honorary Consulting Surgeon to the Melbourne Hospital.

LANE, W. ARBUTHNOT, M.S., F.R.C.S., has been appointed Assistant Surgeon to the Hospital for Sick Children, Great Ormond-street.

MCCORMICK, ALEXANDER, M.B., M.Ch.Ed., M.R.C.S., has been appointed Demonstrator of Anatomy to Sydney University.

ROBERTS, JOHN FARRAR, L.R.C.P., L.R.C.S.Ed., has been appointed Medical Officer to the Ravenstonedale District of the East Ward Union.

SALTER, S. T., M.A. & M.B.Camb. (of St. George's Hospital), has been appointed House Surgeon to the Seamen's Hospital, Greenwich.

SIMMONS, H., L.S.A.Lond., has been appointed Assistant House-Surgeon to the London Temperance Hospital, Hampstead-road.

THOMSON, J., M.D., M.C.Aberd., has been appointed Medical Officer to the Dent District of the Sedbergh Union.

TURNER, GEORGE, L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Hertford Combined Sanitary Districts.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 9th inst., at Alexandra House, Ashburton, Devon, the wife of James Adams, M.D., of a son.

CROWFOOT.—On the 8th inst., at Beccles, Suffolk, the wife of William Miller Crowfoot, M.B., of a daughter.

JAKINS.—On the 9th inst., at Osnaburgh-street, Regent's-park, the wife of Percy S. Jakins, M.R.C.S., of a daughter.

MADDICK.—At Upper Wimpole-street, the wife of E. Distin-Maddick, F.R.C.S.E., late R.N., of a son.

OWEN.—On the 10th inst., at Kent Lodge, Southsea, the wife of A. Lloyd Owen, M.D., of a son.

STEPHEN.—On the 7th inst., at Nicosia, Cyprus, the wife of Guy Neville Stephen, M.R.C.S., Officier de Santé, France, Cyprus Medical Service, of a daughter.

WHEELER.—On the 5th inst., at Pembridge-gardens, W., the wife of John Wheeler, M.D., of a daughter.

MARRIAGES.

ALLAN—BROWNING.—On the 7th inst., at St. Stephen's, St. John's-wood, Francis John Allan, M.D., to Ellen Mary, second daughter of the late Thomas Gaul Browning, Esq., A.I.C.E., Chief Surveyor of Marylebone.

BUXTON—RUXTON.—On the 24th ult., at Rubislaw-terrace, Aberdeen, John Buxton, M.D., Blackpool, Lancs., late 17th Regiment, and A.M.D., to Jane Birnie, eldest daughter of Thomas Ruxton, Advocate, Aberdeen.

MANSELL-MACCULLOCH—THOMSON.—On the 12th inst., at St. Andrew's Church, Sharrow, Sheffield, by the Reverend C. F. Reilly, Chaplain H.M. Forces, cousin of the bride, assisted by the Reverend C. J. Blundell, Curate of the parish, William Mansell-MacCulloch, Esq., M.D.Edin., F.G.S., son of the late Arthur MacCulloch, Esq., of Guernsey, to Ellen Selina Beveridge, only daughter of the late Thomas Hutchins Thomson, Captain 9th Regiment, Madras Native Infantry, and granddaughter of the late General James Mandeville Hackett.

DEATHS.

BALFOUR.—On the 11th inst., at Inverleith House, Edinburgh, John Hutton Balfour, Emeritus Professor of Medicine and Botany, in the University of Edinburgh.

BEALES.—On Sunday, the 3rd inst., at his residence, Chapel House, Congleton, Cheshire, Robert Beales, M.D., J.P., aged 59.

ROY.—On the 17th ult., at Humansdorp, South Africa, John James Roy, M.R.C.S., late Surgeon Imperial Ottoman Army, only son of Mrs. Roy and the late D. T. Roy, M.D., of Brook-green, Hammersmith, aged 36.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

APPLETON, D., & CO., New York.
Transactions of the American Gynecological Society. Vol. VIII. pp. 276.

BLAKISTON, SON, & CO., Philadelphia.
Transactions of the American Surgical Association. Vol. I. Edited by J. Ewing Mears, M.D. pp. 556. With Illustrations.

CASSELL & CO., London.
Our own Country, Descriptive, Historical, Pictorial. Six vols. Illustrated.

CHURCHILL, J. & A., London.
The Diagnosis of Disease of the Spinal Cord. By W. R. Gowers, M.D., F.R.C.P. Third Edition. pp. 90. Illustrated.
Illustrations of Clinical Surgery. By Jonathan Hutchinson, F.R.S. Fasc. XVI.
The Refraction of the Eye. By G. Hartridge, F.R.C.S. pp. 204. With 87 Illustrations.
The Pedigree of Disease. By Jonathan Hutchinson, F.R.S. pp. 142.
Notes on Dental Practice. By H. C. Quinby, L.D.S.R.C.S. pp. 202. With Illustrations.

CLOWES & SONS, London.
The Shareholders' Legal Guide. By Alfred Emden, Barrister-at-law. pp. 171.

DOUGLAS, DAVID, Edinburgh.
A Study of the Bladder during Parturition. By J. Halliday Croom, M.D. pp. 73. With Charts.

HIRSCHWALD, A., Berlin.
Vorlesungen ü. Pharmacologie f. Aertze u. Studirende. Von Dr. C. Binz. 1 Abtheilung.

KIMPTON, HENRY, London.
A Text-book of Inorganic Chemistry. By Prof. V. von Richter. Authorised Translation of Third German Edition. By E. A. Smith, A.M., Ph.D. pp. 424. Illustrated.
The Compend of Anatomy. By J. B. Roberts, A.M., M.D. Third Edition, Revised. pp. 198.

LEWIS, H. K., London.
On Bedside Urine-testing. By G. Oliver, M.D. Lond. Second Edition. pp. 128.
The Parents' Medical Note-book. Compiled by A. Dunbar Walker, M.D., C.M.

NEW SYDENHAM SOCIETY, London.
Handbook of Geographical and Historical Pathology. By Dr. August Hirsch. Vol. I.: Acute Infective Diseases. Translated from the 2nd German Edition by Dr. C. Creighton. pp. 710.

SIMPKIN, MARSHALL, & CO., London.
Our Schools and Colleges. By F. S. Dumaresq de Carteret-Bisson, Capt. 1st Regt. R.J.L.I. Vol. I.: for Boys. Vol. II.: for Girls. pp. 1248-766.

SMITH, ELDER, & CO., London.
St. Bartholomew's Hospital Reports. With Statistical Tables. Vol. XIX. pp. 427-93.

STANFORD, EDWARD, London.
Facts around us. By C. Lloyd Morgan, F.G.S. pp. 164.

TREAT, E. B., New York.
Illustrated Medicine and Surgery. Edited by G. H. Fox and F. R. Sturgis. Vol. II., No. 4.

WYMAN & SONS, London.
Westminster School, Past and Present. By F. H. Forshall. pp. 607.

The Asclepiad, No. 1, Vol. I.—The Effects of the Excessive Use of Alcohol on the Mental Functions of the Brain; by T. S. Clouston, M.D.—Organisation d'une Ligue Sanitaire Internationale; par le Dr. Van den Corput.—The Special Training of Asylum Attendants; by A. C. Clark, M.B.Ed.—Deutsches Archiv. f. Geschichte der Medicin u. Medicinische Geographie; herausgegeben von H. Rohlfs; siebenten Bandes, erstes Heft. (Hirschfeld, Leipzig.)—Archivio di Ortopedia, anno 1, fasc. 1.—Bulletin de la Clinique Nationale Ophthalmologique de l'Hospice des Quinze-vingts; par le Dr. Fienzal.—The Post Magazine Almanack and Insurance Directory.—The State and the Slums; by E. S. Robertson.—The Cure of Intemperance; by W. Abbotts, M.D.—Lister's System of Aseptic Wound Treatment v. its Modifications; by B. A. Watson, M.D. (Collins, Philadelphia.)—The Index Medicus, Vol. V., No. 12.—Prevention of Puerperal Infection; by H. G. Garrigues, M.D.—International Review of Medical and Surgical Technics, Vol. I., No. 1.—The Drainage Schemes proposed for Ramsgate; by H. J. Johnstone, J. P., F.R.C.S.—Prosperous California.—The Length of Life of Total Abstainers and Moderate Drinkers Compared; by C. R. Drysdale, M.D.—Trismus Nascentium; by Dr. J. F. Hartigan.—The Difficulties of Health Reformers: Edinburgh Health Series; by H. H. Almond, M.A.Oxon.—The Coming Reform; by J. D. Mayne. (Chapman & Hall.)—A Short Exposition of Massage; by G. F. Cameron, M.D.—(Baillière, Tindall, and Cox.)—The Physiological and Medicinal Action of "Fluoric" Acid and the Fluorides; by L. A. Waddell, M.B. (Newman, Calcutta.)—Traité de l'Affection Calculeuse du Foie; par le Dr. Jules Cyr. (Delahaye, Paris.)—The Weather of 1883; by E. Mawley, F.R. Met. S., F.R.H.S., (Stanford.)—The Tricyclists' Vade-Mecum. (Cordingley and Sharpe, Hammersmith.)—The House-Purchaser's Guide; by F. Snelling. (Unwin, London.)—Researches on the Pulse-wave Velocity; by A. T. Keyt, M.D.—Ueber das Verhalten des Catgut im Organismus und über Heteroplastik; von Dr. L. V. Lesser.—Fractures of the Neck of the Femur; by N. Senn, M.D.—Burgess-hill as a Health Resort (Second Edition); by T. F. I. Blaker, M.R.C.S.—The Leisure Hour, Sunday at Home, Boy's Own Paper, Girl's Own Paper, Feb.—Good Words and Sunday Magazine, Feb.—Longman's Magazine, Feb.

Medical Diary for the ensuing Week.

Monday, Feb. 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On Mammalian Descent."
MEDICAL SOCIETY OF LONDON.—Drs. Coupland, Bristowe, Cayley, and Frederick Taylor, "On Papers embodying the results obtained in the London Hospitals by the Cold Bath Treatment of Enteric Fever."—Mr. Fleming will show a Surgical Lamp Battery in the Library.—Dr. Sansom will show Specimens of Solid Liniments.

Tuesday, Feb. 19.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Geikie, "On Scenery of the British Isles."
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. The following specimens will be shown:—Spinal Cord from a recent and old case of Infantile Palsy; Amyotrophic Lateral Sclerosis; Malignant Disease of Mesentery; Interstitial Disease of Ovary; Secondary Nodules in Peritoneum in a case of Ovarian Tumour; Two Cases of Purpura Hæmorrhogica in which Organisms were present; A Neoplasm affecting the Knee-joint; Fracture of Cartilage of the First Rib; Insular Sclerosis; Deformity of Feet from Perforating Ulcer (living specimen); Double Vena Cava, the left being the larger (card).

Wednesday, Feb. 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On Mammalian Descent."

Thursday, Feb. 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
ROYAL INSTITUTION.—3 P.M. Professor Pauer, "On Music for the Pianoforte," &c.
HARVEIAN SOCIETY.—8.30 P.M. Dr. W. H. Day, "On a Case of Scarlet Fever in a Boy, followed by Nephritis, Convulsions, and Death; Temporary Relief by Wet Packing."—Dr. Broadbent, "On Prognosis in Structural Diseases of the Heart."

Friday, Feb. 22.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On Mammalian Descent."
ROYAL INSTITUTION.—3 P.M. Sir F. Bramwell, "On London (below bridge) North and South Communication."
CLINICAL SOCIETY OF LONDON.—Mr. Mansell Moullin, "On a Case of Thrombosis of the Vena Cava."—Mr. R. Clement Lucas, "On a Case of Charcot's Joint Disease."—Mr. Noble Smith, "On a Case of Dislocation of one of the Semilunar Cartilages."—Dr. Samuel West, "On a Case of Multiple Hepatic Abscesses in a Boy."—The following living specimens will be exhibited:—A Case of Excision of the Patella, by Mr. R. Clement Lucas; Anomalous Affection of certain Bones and Joints, by Mr. W. Morrant Baker; A Case of Nodules on the Finger, by Mr. Godlee; Case of Pulmonary Regurgitation, by Dr. J. Kingston Fowler.

Saturday, Feb. 23.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Morley, "On Life and Literature under Charles I."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 A.M. by Steward's Instruments.)

THE LANCET OFFICE, Feb. 14th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 8	29·09	S.E.	41	40	..	49	37	..	Foggy
,, 9	29·61	S.W.	49	47	..	50	40	..	Cloudy
,, 10	29·48	S.W.	45	43	..	50	43	·09	Cloudy
,, 11	29·73	S.W.	40	39	..	48	37	·09	Cloudy
,, 12	29·99	W.	47	44	..	51	39	·15	Bright
,, 13	29·97	S.W.	48	46	..	56	45	..	Bright
,, 14	30·14	W.	50	48	..	53	46	·02	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

INSTITUTIONS FOR MORPHIA HABITUÉS.

Inquirens.—(*a*) The case of the morphia *habitué* to which our correspondent refers, and in which the practice followed the hypodermic injection of morphia for sea-sickness, is a promising one for treatment. (*b*) There is no danger in deprivation of the drug under skilled management; but whether the deprivation should be at once and absolute or by rapid gradation must depend on the judgment of the practitioner who carries out the curative method. (*c*) There is no particular home or house, to our knowledge, in which the treatment of the morphia *habitué* is scientifically supervised, and the number of cases is probably too small in this country to call for such a home.

T. F. W.—We are not acquainted with a book especially devoted to the subject.

"HIS LORDSHIP'S FOUR MEDICAL ATTENDANTS AND BUTLER."

To the Editor of THE LANCET.

SIR,—I never see *The Times*, and do not know what report it may have given of the late Lord Hertford's funeral, but if it gave it as above, it was wrong; and in adopting *The Times'* report, and commenting as you do on the action of the medical gentlemen who were present, you do them grievous wrong, I doubt not unwittingly. In the first place, the "order of procession" is wrongly given; and, in the second, none of the medical men present are on the "establishment or household" of the late Lord Hertford. "The order of procession" was—"Messrs. G. H. Fosbroke, C. Hobbes, T. H. Smith, and T. L. Smith. General's sword, hat, and Order of the Bath, borne on cushion by butler." (I quote from the *Leamington Spa Courier* of Feb. 2nd.) The gentleman first mentioned is the medical officer of health for South Warwickshire, and does not practise at all. He, with Mr. Hobbes, was out hunting when the fatal accident happened, and they at once rendered all the assistance in their power, and remained with Lord Hertford after the Messrs. Smith (practitioners in the neighbouring town of Alcester, and his lordship's usual medical attendants) arrived, presumably at their request, and rendered all the aid they could from motives of humanity. They were probably invited to attend the funeral from motives of courtesy by those who are courteous and kind to all with whom they come in contact. As a practitioner in the neighbourhood, I think I may say that no gentlemen are more likely to uphold the honour and dignity of the profession than the gentlemen mentioned.—I am, Sir, your obedient servant,

The Old Vicarage, Stratford-on-Avon, Feb. 9th, 1884. HARRY LUPTON.

*** This, of course, disposes of the complaint made to us. We know nothing of the matter outside the printed report to which our attention was drawn. The general question on which we commented stands as we left it.—ED. L.

MILK ADULTERATION.

IN his report to the Commissioners of Sewers, Dr. Sedgwick Saunders, Public Analyst, makes the following remarks on the question of the adulteration of milk :—

"To demonstrate the difference in the degrees of adulteration [of milk] by calculations made from different standards, I may instance the following example, taken from my note book :—A sample of suspected milk yielded upon analysis 7·2 per cent. of 'solids not fat'; if in estimating the amount of added water (the measure of adulteration) we adopt the standard of the Society of Public Analysts (9·0 per cent.) we get the following :—9·0 : 7·2 :: 100 = 80 per cent. milk, 100 — 80 = 20 per cent. of added water; the sample would therefore be said to be adulterated with 20 per cent. of added water. Now, if we take the standard of the Somerset House chemists—viz., 8·5 per cent. (solids not fat)—our problem would work out thus :—8·5 : 7·2 :: 100 = 84·7 per cent. milk, 100 — 84·7 = 15·4 per cent. of added water, and accordingly the milk would be certified as adulterated to the extent of 15·3 per cent. only."

Etiquette.—There is no option to a practitioner but to go at a parent's request to see his child. The "other" practitioner should have a courteous notice of the change from the parent.

Mr. R. C. Chicken.—We must refer our correspondent to the *Insurance Record* or a similar publication.

"CATHETER FEVER."

To the Editor of THE LANCET.

SIR,—It appears to me that the majority of those who have taken part in the discussion on Sir Andrew Clark's paper on the above subject have departed from the point at issue. As I understand it, Sir Andrew Clark's contention is that in certain cases where up till that time the several organs had performed their functions in such a manner that the organism as a whole was kept up to a fair standard of health, the use of the catheter has been attended by a feverish condition and by those symptoms which indicate a "typhoid state;" and that, consequently, we ought not to allow a patient to enter upon a catheter life without seeing that external circumstances are favourable.

Now, whatever may have been taught in regard to this elsewhere, I am under the belief that such has long been the accepted teaching in the Edinburgh Medical School. Of this I am certain that I have been perfectly aware of the fact since my student days from the teaching of Dr. Heron Watson. That fact, inculcated by Dr. Watson both in his systematic lectures on Surgery and in his wards, made a strong impression upon my mind, and has always been borne in mind in my treatment of such cases, with, I believe, advantage to my patients. Though practitioners in the provinces have not a superfluity of such patients, my experience, such as it is, supports the statement already made. I do not think that the explanation of this tendency to fever is far to seek; and, as the explanation which I suggest differs somewhat from any hitherto adduced, and, moreover, holds good without reference immediately to the vexed question of kidney lesion, I venture to hope that you will give this communication a place in your columns.

In my Graduation Thesis on the Relation of Pyrexia to Germs (Edin. Univ., Aug. 1882) I pointed out that, though we are constantly subjected to the attacks of micro-organisms, or the still smaller germs of those which exist constantly in the atmosphere (to say nothing of the germs of infectious disease), the healthy living body has a wonderful power of resisting their influence. Were it not the case that these can gain entrance to the blood, whence come the bacteria and micrococci found in the pus of acute abscesses? Anything which depresses the vital energy or alters the constitution of the blood is apt to deprive the organism of its power to deal with these influences successfully. Now, the nervous system generally is only one factor in maintaining the body in its normal condition of health. Without entering into the question of whether there be a centre for the regulation of temperature, few will doubt, I think, that the nervous system is the power which preserves the balance between the generation and elimination of heat. Many causes may disturb this controlling influence. For instance, in any of the exanthemata it would appear that if the temperature rise to a certain height (somewhere above 106° F., but varying in different individuals), a paralysis of the controlling nervous system takes place, and a still greater divergence from the normal temperature results. In such cases of hyperpyrexia we find the cold bath rather than antiseptic antipyretics valuable by actually abstracting heat, and so allowing the nervous system to recover itself.

So, too, in the case of catheter fever. We can quite well understand that the shock to the nervous system conducted from end organs, admittedly the most sensitive in the body to local irritation, brings about such a depression of nerve energy that it is unable to preserve the balance already spoken of, with a result that the blood and tissues generally are allowed to retain and propagate those organisms which speedily bring about the so-called "typhoid state."

That this explanation is feasible is rendered more striking by the fact that patients who are found most prone to this disorder are those in whom the urine is known to be possibly large in quantity, but certainly low in specific gravity. We all know how frequently such a state of matters prevails in functional disorders of the nervous system.

I might have written much more fully, but am unwilling to trespass further on your valuable space.

I am, Sir, your obedient servant,

Crieff, N.B., Jan. 23rd, 1884. ALEX. THOM, jun., M.D., &c.

Fiat Justitia.—Our correspondent does not say to what court he refers. In the County Court ten shillings to a guinea a day is allowed, at the discretion of the judge. It is usual in this case to allow second-class travelling expenses, or a sum not exceeding 3d. a mile each way where there is no railway. In the Court of Appeal, Supreme Court of Judicature, and the Divorce Court, the fee is £1 1s. a day for ordinary medical witnesses. In the Divorce Court no travelling expenses are allowed if the witness resides within five miles of the General Post-office.

A MIDWIFERY CASE.

To the Editor of THE LANCET.

SIR,—You may deem the following worthy of record. About 10 A.M. on Jan. 11th I was summoned by a man to attend his wife, who had been in labour since 3 A.M. of the previous day. He said this was her tenth confinement, that her labours had always been lingering, that she had always been delivered by a midwife except on one occasion, when he had to call in a doctor, who was obliged to help her in consequence of a cross-birth. The woman told me her pains were not strong; were very irregular, and chiefly in the hypogastrium; that just before sending for me she passed what she called her "colours," and nothing since. She also said that the uterine contractions never caused her pain until near the termination of her labours, but which she described as "forcing." I found the os very slightly dilated, could not make out the presentation, and went away, leaving orders to send for me should the pains become stronger. At 3 P.M. I found the situation unaltered. At 9 P.M. she said her pains were becoming better, and that a quantity of the waters had escaped. During the next pain I found the head, enveloped in the bag of membranes, resting on the perineum; os fully dilated. The pains having subsided, and there being an unusual quantity of liquor amnii, I determined to rupture the membranes at the next pain. After lying down for some time, she got up and walked about, saying the pains always left her when she lay down. She quickly experienced a pain, and knelt on the floor, supporting herself against a chair. To my dismay I found the head had receded, and a foot presenting instead. I immediately ruptured the membranes and brought down the foot, which I had to hold firmly to prevent its receding into the uterus. While grasping the other thigh I endeavoured to bring down the breech, but could not move it. Passing my hand along the limb, I found the other foot hooked around the neck of the child. Having disengaged it, I completed the delivery with all possible speed. The child (male) was stillborn, but after assiduous efforts for ten or fifteen minutes, I succeeded in resuscitating it. The further progress of the case was favourable.

The points of interest in this case are the rapid and alarming change of presentation, and the difficult complication of the foot, having become hooked around the child's neck. The fœtus had evidently been floating about in several quarts of liquor amnii and constantly changing its position, and the lesson I would derive is in every case of hydrops amnii to rupture the membranes the moment one gets a favourable presentation without waiting for a pain, and irrespective of the condition of the os.

I am, Sir, yours truly,

Ashton, Rhode Island, Jan. 17th, 1884. N. O'D. PARKS, B.A., &c.

L.R.C.P. Ed.—We have no acquaintance with the instrument.

G. A. W. (Bray) should consult his medical attendant.

"DETERMINATION OF SEX."

To the Editor of THE LANCET.

SIR,—Dr. Ross, in THE LANCET of Feb. 9th, takes for granted that the "causation of sex in all the vertebrata is identical." On Jan. 5th he says that all the theories regarding the determination of sex previous to the one he suggests are "superficial and unscientific." The theory that he suggests—viz., that the particular sex depends upon "the number of spermatozoa penetrating the zona pellucida" is surely superficial enough, seeing that to support it he has not stated one fact. He points out (Feb. 9th) that the hen has only one ovary, and yet we have two sexes. The very fact that the hen has one ovary and mammals two surely points to the ovaries in each having different ways of performing their functions. It is possible to disprove that the two ovaries in woman do produce different sexes, but in theory can only stand because of the impossibility of discovering any other cause for the production of sexes, and therefore can hardly be viewed as scientific. I have no doubt some ovariotomists could state cases which would throw considerable light upon the ovary theory, although it might not always be the same ovary (right or left) that the strong ovum comes from in different cases. Still if we had statistics showing that when one ovary was removed the patient gave birth to only one sex, or to both, it would go a long way to set aside this theory, although it would not prove the spermatozoa one.

I am, Sir, yours, &c.,

Elm House, Hawick, Feb. 9th, 1884. JOHN R. HAMILTON, M.D.

To the Editor of THE LANCET.

SIR,—At page 191 of your issue of the 26th ult., Dr. Hamilton records the case of a patient who had borne two males after extirpation of the right ovary. Last week I delivered a patient of a male child, the mother having undergone left ovariotomy in January, 1883. Mr. Thomas Tuckey in 1878 suggested that the right ovaries created males, the left females—*vide* "Digest," sec. 577 : 2. These cases are sufficient to refute the ovular theory, and to clear the field for other theories.

I am, Sir, yours obediently,

RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, N.W.,
Feb. 9th, 1884.

British Queen.—Our correspondent has been badly and uncourteously used. If he can swear that he was distinctly told that he should have or give half a year's notice, he should press the claim for half a year's salary in the County Court. It would have been better still, of course, to have had a written contract. But we can scarcely doubt that any County Court judge would see the propriety of a reasonable notice being given to a medical officer.

A Medical Practitioner is right in declining a patient rather than sacrifice his right to use his own discretion on so important a subject as that of chloroform. We are obliged to him for directing attention to the subject.

THE SALICYLATES IN DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—Some months ago I proposed the use of the salicylates in pneumonia, and at the same time I gave a very favourable opinion of their action. I wish now, through the medium of your valuable journal, not only to advocate their use in that disease if possible more strongly than ever, but also to propose that they should be tried in diphtheria and true croup. I suggested this in a very cursory manner in the *British Medical Journal* last year ("Omega," June 23rd), but have never had an opportunity of testing their effects practically, although the theory I have formed as to the action of salicylates in general would seem to indicate the advisability of employing them.

In pneumonia I prescribe five- to ten-grain doses of the salicylate of soda every two hours, with twenty-minim doses of the aromatic spirits of ammonia for an adult. If the pulse should be very rapid and feeble, I add five-minim doses of digitalis, and if there should be any delirium, ten-grain doses of the bromide of potassium. In children an acute congestion of the lungs is very rapidly thrown off with three-grain doses of the salicylate and five minims of ammonia every two hours. The compound spirits of ammonia is well known to have the property of reducing the fibrin-forming elements of the blood; but I am of opinion that the salicylate of soda prevents the formation of fibrin altogether, and in this way it may be said to be no more a specific for rheumatic fever than for pneumonia or diphtheria, or indeed for any other disease which is associated with or accompanied by the formation of fibrin. Whether it acts by altering the composition of the corpuscles so as to prevent the formation of fibrino-plastic material, or upon the plasma, to prevent the development of fibrinogen, I am not prepared to say, but certain it is that there is the production by its use of a state of greater liquidity of the blood than ordinarily; and it is on this account that I think the mixture I have mentioned above will prove useful in the treatment of diphtheria and true croup, although in false or congestive croup I am inclined to place more confidence in astringents, such as steel and sulphuric acid.—I am, Sir, your obedient servant,

Clayton-le-Moors, Feb. 8th, 1884. C. R. ILLINGWORTH, M.D. Ed.

A Thirty Years' Constant Subscriber has not enclosed his card.

Mr. A. Hind.—Yes, when opportunity offers.

"UNDER WHAT CIRCUMSTANCES CAN NURSES ENFORCE PAYMENT OF FEES?"

To the Editor of THE LANCET.

SIR,—As the superintendent of a nursing institution and as a trained monthly nurse myself, may I corroborate the letter of "A Constant Subscriber" in your last week's issue? Monthly nurses are engaged often six months beforehand, and for a special date. The nurse is kept or keeps herself disengaged for that date, often giving up other cases, in order to be ready; and it would be hard indeed if, through the lady's miscalculation or other uncontrollable circumstances, she lost her fee. It is within the range of possibility that in this way she might lose six months' fees out of the year. Indeed, she would never be sure of getting any money at all. It would be in the interest of monthly nurses if other institutions would state their practice in such a case. I would add that monthly nurses are usually engaged from institutions, by personal interview with the nurse (unlike other nurses, the selection of one of whom is usually left to the discretion of the superintendent), and the engager expects that particular nurse reserved for her, which makes the necessity for her fee being secure greater.

I am, Sir, yours faithfully,

ELINOR AGNES BEDINGFELD,
Superintendent of the Belgravia Institute for Trained
Feb. 11th, 1884. Nurses, Vauxhall-bridge-road, S.W.

ARTIFICIAL ITALIAN ATMOSPHERE.

To the Editor of THE LANCET.

SIR,—The recent experiments of Dr. Moffat have created a great stir among a section of the medical profession interested in music. Two objections to his theory, however, present themselves to my mind—First, if peroxide of hydrogen has such an effect on the voice, we would expect that English vocalists visiting Italy ought to experience the same improvement in their voices as resulted from the experiments of Dr. Moffat. I have written to several friends of mine who have been pupils at the Conservatoire of Milan, and none of them noticed any notable improvement in the compass or quality of their vocalisation. Secondly, there is not a proportionate deterioration in the voices of Italian singers who remove themselves from the influence of their "musical atmosphere." They may suffer from relaxed throats, the result of our humid climate, but that is only temporary.—I remain, Sir, yours very truly,

Plymouth, Feb. 11th, 1884. T. E. WHITE, Surgeon.

Assistant.—Our views do not materially differ from those of our correspondent. The present Medical Council, acting under the existing law, has expressed the very strongest opinion on the impropriety of medical men allowing unqualified assistants to do responsible medical work. Subordinate work done under the immediate supervision of a qualified principal is not likely to be objected to. The new Medical Bill is not yet introduced.

"SEVERE CRITICISM" THE BEST AID TO HOSPITALS.

To the Editor of THE LANCET.

SIR,—I venture, with respect, to contest your conclusions in regard to the Hospitals Association meeting, "that there has been criticism enough upon hospital management."

I belong to a hospital by the laws of which the committee of management is elected every year by the governors in annual meeting assembled. Between the years 1863 and 1883 not one annual general meeting was convened by the committee of management; and it was not until after six months' repeated demands that the governors, headed by the medical officers, obtained a general meeting in the autumn of last year.

A medical charity should be, like Cæsar's wife, above suspicion; and any criticism which had prevented the *laches* of the committee of management, which had re-elected itself year after year for fifteen years, would have been vitally beneficial to the institution. And it was the absence of criticism which emboldened the committee of management—half a dozen insignificant individuals—to deprive the medical officers of all share in the management, and to restrict the benefits and popularity of the hospital within the smallest possible limits.

Forty years' experience of medical charities convinces me that the public will always liberally pay for honest work economically superintended.

I am, Sir, yours respectfully,

Feb. 14th, 1884. HOSPITAL PHYSICIAN.

*** We do not differ from our correspondent as to the good uses of criticism. But we think criticism should not be dissociated from help and sympathy. His hospital is not a model one. But he does not show that its faults have not been noticed by the Hospital Sunday Fund, which, we contend, exists alike to help and criticise.—ED. L.

C. R.—The publishers of the "Australian Medical Directory" are Messrs. Baillière, Tindall, and Cox, King William-street, Strand.

Mr. W. J. Browne.—Walshe's book is perhaps the best for the purpose.

THE MANCHESTER EDINBURGH UNIVERSITY CLUB.

To the Editor of THE LANCET.

SIR,—Permi t me to correct a very unaccountable error which occurs in the notice of the late annual dinner of this Club in THE LANCET of to-day. The chair was occupied on that occasion by our president, Dr. Thorburn, and not, as you state, by me. I very much regret this error, and all the more so because of the very admirable manner in which the duties of chairman were fulfilled by Dr. Thorburn. His speech in proposing the health of Sir Joseph Lister greatly charmed his audience by its cordial sympathy and singularly graceful diction. It was a most happy piece of oratory, and will not be soon forgotten.

I am, Sir, yours obediently,

Manchester, Feb. 9th, 1884. JAMES HARDIE.

*** We regret the error above referred to escaped correction. Also that the word "Edinburgh" was omitted from the heading. Sir Joseph Lister was the guest of the Manchester Edinburgh University Club. Dr. Thorburn was the fellow-resident officer of the Edinburgh Royal Infirmary with Mr. Lister, and in that capacity had opportunities of noticing those qualities of industrious investigation which have since issued so successfully.—ED. L.

Mr. Andrew Wood is referred to the Students' Number, published in September last.

DUTIES OF POOR-LAW MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—I am a Poor-law medical officer of thirty years' service, and, being in a difficulty with my guardians, would be glad of advice. Hitherto all operations in the Kendal Workhouse have been paid as extras, but last year the inspector pointed out that in the workhouse "no extras are allowed." Now, it happens that in this workhouse there is neither nursing nor accommodation for operations, and the cases are sent to a small hospital belonging to the town and in the Kendal district. In the rules of this hospital it is distinctly stated that "the admission of pauper patients, the attendance on whom entitles the union district medical officer to extra payment, shall not be held to interfere with the claim of such officer to his accustomed fees." I have the two separate appointments—to the workhouse and also to the district. The guardians refuse to pay my fee for operating in an amputation in this hospital because the patient has been removed from the workhouse to the hospital for the operation. The point is this: After the patient leaves the workhouse does not he come under the care of the district medical officer, who is able to recover his fee? The patient died, and the master of the workhouse was not allowed to provide a coffin, which was sent by the relieving officer for the district. If I had only been medical officer to the workhouse, could I have been compelled to do duty outside its walls and intrude into the province of the district medical officer?

I am, Sir, yours truly,

Feb. 11th, 1884. A SUBSCRIBER FOR 33 YEARS.

OUT-PATIENT DEPARTMENTS.

To the Editor of THE LANCET.

SIR,—Would you kindly insert the enclosed letter, since I think it may benefit many. The case was as follows. Some friends of patients gave up half a day's work—a serious matter with them, they having five or six miles to travel—and on more than one occasion they had to wait till twenty minutes to 4 P.M. before they were allowed to see their husband, wife, or near relative or friend, and precisely at 4 P.M. they were all turned out. I know some hospitals are exceedingly particular in allowing patients to see their friends exactly at the visiting hour. Personally I think the sweet sympathy of a loving friend's voice and expression has sometimes more beneficial effect than medicine. I have brought this subject forward for the sake of the poor, and hope it may prove beneficial.—I am, Sir, yours obediently,

A. STYLEMAN HERRING,
Vicar of St. Paul's, Clerkenwell.

Colebrooke-row, Islington-green, Feb. 12th, 1884.

"St. Bartholomew's Hospital, London, E.C.,
Jan. 22nd, 1884.

"Sir,—Your card addressed to the chairman of this hospital has been laid before the Committee of Almoners, who desire me to say that, although they greatly regret the disappointment and inconvenience the patients' friends sometimes experience in being kept waiting to see them after the appointed visiting hour, they do not think it possible, in the interest of the patients, always to prevent such an occurrence. The physicians and surgeons commence their attendance in the wards at regularly appointed hours, which are arranged with regard to the best working of the hospital generally, and are such as, in the ordinary course, to allow of their completing their attendance before the visiting hour. It is inevitable, however, that it should sometimes happen that cases newly admitted into the hospital, or others of serious illness urgently demanding attention, should occupy the physicians and surgeons longer than could have been provided for by any precise allotment of time; and as such are the only circumstances under which visitors are kept waiting before entering the wards, the almoners cannot but consider that the interests of the patients suffer far less by that delay—much to be regretted though it is—than by any attempted enforcement of a rule that the medical officers must invariably leave the wards at a stated time, whether or not there are cases still requiring their attention.—I am, Sir, your obedient servant,

"Rev. A. Styleman Herring." "W. H. CROSS, Clerk.

COD-LIVER OIL EMULSION.

To the Editor of THE LANCET.

SIR,—I would esteem it a favour if any of your readers could supply me with the formula of Mackenzie's cod-liver oil emulsion.

I am, Sir, yours truly,
Feb. 12th, 1884. INQUIRENS.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer, London; Sir J. A. Hanbury; Professor Lawrie, Lahore; Rev. A. S. Herring, London; Mr. Macnamara; Dr. A. M. Brown, London; Mr. W. J. Browne, Edinburgh; Dr. Thorburn, Manchester; Mr. Makuna; Mr. Robins, Waltham; Mr. Simeon Snell, Sheffield; Mr. B. Roth, Brighton; Mr. Meade, Bradford; Dr. Byrom Bramwell, Edinburgh; Dr. Lloyd Roberts, Denbigh; Dr. J. B. Russell, Glasgow; Mr. J. Cantlie, London; Dr. H. Mygind, Copenhagen; Mr. P. Belcher, Burton-on-Trent; Messrs. Trübner and Co., London; Dr. W. Ewart, London; Dr. Neale, London; Mr. Wright, Nottingham; Mr. Cureton, Shrewsbury; Mr. Prideaux, Wellington; Mr. G. R. Jesse, London; Mr. R. Snowdon, Widnes; Mr. Nelson Hardy, Dulwich; Dr. Thorn, Crieff; Mr. G. W. Parker, Madagascar; Dr. Hamilton, Hawick; Mr. White, Plymouth; Dr. C. S. Taylor, London; Dr. Illingworth, Clayton-le-Moors; Mr. J. Hardie, Manchester; Surgeon-Major Yeates Hunter, Karachi; Dr. Waddell, Calcutta; Dr. Wortabet, Beyrout; Dr. Lucas, Ahmedabad; Mr. Frere, London; Dr. Bell, Glasgow; Mr. Chicken, Nottingham; Dr. Robson, Leeds; Mr. Atkin, Sheffield; Mr. Pocknell; Dr. Pavy, London; Mr. Lupton, Stratford-on-Avon; Mrs. Bedingfeld, London; Dr. Seymour Taylor, London; Mr. Reginald Harrison, Liverpool; Mr. Ross, London; Messrs. Sampson Low and Co., London; Mr. Behran, Nangpore; Messrs. Lee and Nightingale, Birmingham; Mr. Dacota, Indiana; Mr. Pejer, Dewar; Dr. Dickey, Raphoe; Mr. Keegan, Indore; Mr. Claxton, Ely; Mr. Armstrong, Manchester; Mr. Douglas, Edinburgh; Messrs. Hatchman and Co., London; Mr. Bamfort, St. Albans; Dr. Gibbes, London; Mr. Barber, Bristol; Mr. Leybone, Bedford; Mr. Stafford, Boyle; Mr. Fairbridge, London; Mr. Deeping, Leicester; Messrs. Wright and Co., London; Mr. Steadman, Godalming; Mr. Greenish, London; Messrs. Dawson and Sons, Montreal; Mr. Nash, London; Messrs. Monk and Co., London; Mr. Miller, Orkney; Mr. Murray; Messrs. Christy and Co., London; Dr. Thompson, Kensington; Dr. B. Fenwick, London; Dr. Sedgwick Saunders, London; Dr. Squire, London; Dr. Davidson, Bombay; Dr. Barlow, Harpurhey; Dr. G. Fowler, London; Mr. J. L. Kerr, Manchester; Mr. Irvine, Nottingham; Dr. W. G. Balfour, Byculla; Mr. Waldy, Newcastle-on-Tyne; British Queen; A. K.; A. A. G. G.; M.D., Beaconsfield; G., Llandudno; S. P.; F.R.C.S., London; J. E. S.; Disgusted; Etiquette; M D.; One who desires Notification by the Householder; An Ordinary General Practitioner; H.; Inquirens; Old Rugbeian; The Director-General, A.M.D.; A Subscriber for 33 Years; Hospital Physician; Assistant; Fiat Justitia; Colonel; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Rev. A. Tooth, Croydon; Mr. Russell, London; Mr. Tarbart, Kentish-town; Mr. Walker, London; Mr. Burton, London; Mr. Lay, Northampton; Messrs. Mottershead and Co., Manchester; Messrs. Griffin and Son, Ealing; Mr. Middleton, Butterknowle; Messrs. Robertson and Scott, Edinburgh; Messrs. Evans and Co.; Mr. Hodgson, London; Mr. Fyte, Mitchinhampton; Mr. Barker, Sheffield; Dr. Thursfield, Llandudno; Mr. Binks, Wakefield; Mr. Irving, Grantham; Mr. Lacy, London; Dr. Gibbes; Mr. Unsworth, Liverpool; Messrs. Hay and Sons, London; Mr. Sergeant, London; Mr. Bowdidge; Mr. Griffith, Norwich; Dr. M'Culloch, Sheffield; Messrs. Woolley and Son, Manchester; Mr. Jenkins, Grantham; Dr. Macpherson, Middlesbro'; Mr. Hamel, Tamworth; Messrs. Robinson and Sons, Chesterfield; Mr. Cooper, Cheltenham; Mr. Booth, Durham; Mr. Carter, London; Dr. G. Harley, London; Dr. M'Lintock, Shrewsbury; Mr. Boyveau, Paris; Mrs. Chambers; Mr. Lane, London; Mr. Parsell; Dr. Finch, Salisbury; Messrs. Skarke and Co., Glasgow; Messrs. Stent and Son, Guildford; Dr. Haversham, London; Mr. Bullivant, Derby; Mr. Crofts, Burton-on-Trent; Mr. Carmichael, Barrow-in-Furness; Dr. Thurston, Tunbridge-wells; Mr. Laxby, London; Mr. Hulme, Birmingham; Mr. Stride, Brighton; Mr. Morgan, Mildmay-park; Mr. Saunders, London; Mr. Bricknell, Beaconsfield; Mr. Hill, London; Dr. Bigg, Thame; Mr. Rutherford, Kelso; Mr. Griggs, Brockley; Dr. Kerr, Crawshawbooth; Mr. Trent, Folkestone; Messrs. Richards and Co., London; Mrs. Griffiths, Southport; Mr. Smallwood, Marlpool; Mr. Douglas, Edinburgh; Mr. White, Cam; Financial; D. S.; Forceps, Preston; M.D., Forest-hill; Speranza; M.B., M.A.; F.; S. H. H., Edinburgh; Medicus, Liverpool; A., Bracebridge; Doctor, Limerick; W. P. P., Southsea; L. G., Hampstead; E. F. N.; Alpha; Medicus, Hornsey; L. S. A., Brixton; Mr. F. P., Birkenhead; G.; A. B., Cheltenham; M. B. C. M.; C., Manchester; E. K.; Physician, Leeds; Q.; J. M. C., Huddersfield; X.; Cantab; A. M.; M. M., Shipley; &c. &c.

Times of India, Oxford University Herald, Reading Mercury, Galloway Gazette, Bournemouth Guardian, Herts Advertiser, Western Mail, The Schoolmaster, Bombay Gazette, &c., have been received.

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Seven lines and under (each averaging ten words).	
Every additional Line	0 0 6
Front Page .. .. per Line	0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom, and all other Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.